



























MEASURES OF AUSTRALIA'S PROGRESS 2010

IS LIFE IN AUSTRALIA GETTING BETTER?

 Society	 Economy	 Environment
<ul style="list-style-type: none">  Health  Education & training  Work  Crime  Family, community & social cohesion  Democracy, governance & citizenship 	<ul style="list-style-type: none">  National income  National wealth  Household economic wellbeing  Housing  Productivity 	<ul style="list-style-type: none">  Biodiversity  Land  Inland waters  Oceans & estuaries  Atmosphere  Waste
Legend <ul style="list-style-type: none">  Progress has generally been made in this headline indicator compared with ten years ago  This headline indicator has generally regressed compared with ten years ago  There has been no significant movement in this headline indicator compared with ten years ago  There is either no headline indicator for this area of progress or no time series 		

History of changes

Measures of Australia's Progress consultation reports back

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About MAP

ABOUT MAP

This publication is designed to help Australians address the question, 'Is life in Australia getting better?'. MAP provides a digestible selection of statistical evidence in answer to this question. Australians can use this evidence to form their own view of how our country is progressing.

For more information about MAP, see [What is MAP?](#).

For information on how to navigate this product, see [How do I navigate this product?](#)

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About MAP

PREFACE

In April 2002, the Australian Bureau of Statistics made a major contribution to measuring whether life is getting better in Australia with the release of the first issue of *Measures of Australia's Progress* (MAP), then called *Measuring Australia's Progress*. At that time, the Bulletin referred to this publication as a revolutionary set of indicators which provided great insights on how life is improving, and at what rate. As a result, the Bulletin nominated the Australian Statistician as one of Australia's Smart 100 in 2003.

Setting out a suite of social, economic and environmental indicators that aim to measure a country's progress continues to be one of the most important and challenging tasks that a national statistical agency undertakes. In this 2010 edition of *Measures of Australia's Progress*, the ABS has met those challenges by including a number of changes that improve the usefulness of the information for the Australian community.

- A dashboard display of key social, economic and environmental headline indicators improves accessibility and visibility and helps people, at a glance, to assess whether some key aspects of life in Australia are getting better
- The publication is now entirely electronic
- A headline indicator, low income rental affordability, has been included for the first time in the Housing dimension
- The Environment dimension has been restructured to move towards a presentation that is more consistent with other major environmental reports, notably the State of the Environment report produced five yearly under the Environment Protection and Biodiversity Conservation Act 1999.

Public interest in the interrelationships between economic, social and environmental aspects of life continues to grow in communities, in governments, and internationally. Building in part on the MAP initiative, the OECD, in partnership with a range of other international institutions, established a Global Project on Measuring the Progress of Societies and has since hosted three major international dialogues and debates on measuring societal progress. More recently, a report by the *Commission on the Measurement of Economic Performance and Social Progress* and the *European Union Beyond GDP* report, to name just two, have recommended a rethink of measurement systems and encouraged a national and global dialogue on what we care about, whether what we are striving for is achieving what we care about, and whether this is adequately reflected in our national and international metrics.

Although *Measures of Australia's Progress* has presented, side-by-side, measures of economic performance, social wellbeing and the environment since 2002, the question remains as to whether these measures adequately represent what most Australians care about. For this reason, and to take account of the international work in this area, the ABS has included a special article in this edition setting out possible future directions for measuring progress in Australia. I encourage you to look at this article, discuss it, and provide us with feedback on what is important to you so that future editions present measures that you and others in Australian society care about. Your suggestions and comments are most welcome and can be provided through our blog at <www.abs.gov.au/about/progress/blog>, through participation in one of the many dialogues which will be conducted throughout Australia during coming months, or directly to the Director of Social and Progress Reporting section at the address below.

As in past editions, a number of people have assisted in contributing to this edition. I would like to express special thanks for the contributions and support from our group of expert external advisors - Mr David Borthwick, Professor Mike Salvaris, Professor Fiona Stanley, Mr Rob Ward, Dr Ken Tallis, Dr Subho Banerjee and Ms Sue Vroombout.

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About MAP

WHAT IS MAP?

This publication is designed to help Australians address the question, 'Is life in Australia getting better?'. MAP provides a digestible selection of statistical evidence in answer to this question. Australians can use this evidence to form their own view of how our country is progressing.

The range of key statistical measures that MAP presents demonstrate change. They are grouped under three broad headings: the society, the economy and the environment.

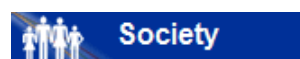
Within these broad domains several dimensions are addressed, such as health and work within the social domain, national income within the economic domain, and biodiversity within the environmental domain.

Within each dimension there are a range of statistical measures presented, known as progress indicators. These indicators tell a story about the extent of progress within that dimension.

The indicators directly address the notion of progress, and some contextual measures are also included which provide useful context to support the progress information. In addition, for some dimensions, information that relates to specific groups of interest, such as older people, men and women, or Aboriginal and Torres Strait Islander peoples is included.

The major domains of progress that are included in MAP, and their underlying dimensions, are illustrated in the table below. For more information about the structure of MAP see [What is the underlying structure of MAP?](#) For information about how to access the information and get around MAP go to [How do I navigate this product?](#)

For a full list of dimensions and indicators see [Appendix A](#)



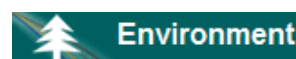
Society

- Health
- Education and training
- Work
- Family, community and social cohesion
- Crime
- Democracy, governance and citizenship



Economy

- National income
- National wealth
- Household economic wellbeing
- Housing
- Productivity



Environment

- Biodiversity
- Land
- Inland waters
- Oceans and estuaries
- Atmosphere
- Waste

Headline dimensions

Supplementary dimensions

- Culture and leisure
- Communication
- Transport
- Inflation
- Competitiveness and openness

Go to our [blog](#) to tell us your views on MAP

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About MAP

WHY DID THE ABS DEVELOP MAP?

Public interest in the relationships between economic, social and environmental aspects of life continues to grow in communities, in governments, and internationally. Gross Domestic Product (GDP) has been regarded as an important measure of economic growth, however growing interest in a more complete picture of progress inspired the assessment of GDP and other economic measures in conjunction with other indicators of progress, such as those that demonstrate social and environmental outcomes. This is the prime reason the ABS originally developed Measures of Australia's Progress (MAP) and has continued to publish data in this format.

Indeed, interest in measuring progress has accelerated in recent years, and the number of commentators asking for social and environmental measures to be considered in addition to traditional economic measures has grown. For example, since 2004, the OECD has hosted three major international dialogues and debates on measuring societal progress. More recently, a report by the Commission on the Measurement of Economic Performance and Social Progress (Stiglitz, Sen and Fitoussi 2009) and the European Union's Beyond GDP report (Costanza, Hart, Posner and Talberth 2009) to name just two, have recommended a rethink of measurement systems and encouraged a national and global dialogue on what societies care about, and whether this is adequately reflected in our national and international statistics.

Recent events in Australia have also moved strongly in this direction. In 2009, the Australia 2020 Summit discussed the need for improved indicators of progress and proposed the development of an Australian National Development Index (ANDI). In 2010, the ANDI will be launched.

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About MAP

HOW HAS MAP EVOLVED SINCE THE LAST RELEASE?

Measures of Australia's Progress continues to evolve and a number of changes have been incorporated into this edition:

- The publication is now entirely electronic, supported by a hard copy brochure. This has allowed us to use data visualisation tools to enhance the graphs. See [How do I navigate this product?](#) for details on how to navigate the electronic MAP.
- A dashboard display of social, economic and environmental headline indicators on the MAP home page improves the accessibility and visibility of the measures and helps people, at a glance, to assess whether some key aspects of life in Australia are getting better.
- The Environment domain has been restructured towards a presentation that is more consistent with other major environmental reports, notably the State of the Environment report produced five yearly under the Environment Protection and Biodiversity Conservation Act 1999.
- A headline indicator, low income rental affordability, has been included for the first time in the Housing dimension.

Go to our [blog](#) to tell us your views on these changes

This edition of MAP also includes a special article outlining future directions for measuring Australia's progress [Future Directions Essay](#). The ABS encourages readers to provide feedback on this article and the approach it proposes on our [blog](#).

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About MAP

HOW DOES MAP DIFFER FROM OTHER PUBLICATIONS?

The ABS already provides a rich array of statistics relevant to assessing progress through its many data releases. However, the very size of that information base means it is not necessarily readily accessible to many people.

ABS products provide an insight into one or a few aspects of life – say, health, education, income or biodiversity. A more complete picture of progress considers these aspects of life together.

MAP is unique in that it brings a digestible selection of statistical evidence together from across all of these areas. The ABS hopes this will assist Australians to make their own assessment of whether life in Australia is getting better, and that readers are encouraged to gather more information from the full range of ABS and non-ABS publications to supplement this assessment.

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About MAP

WHAT PROCESS WAS UNDERTAKEN IN DEVELOPING MAP?

In the design of MAP 2010, we were guided by past and recent ABS consultations. The ABS has a systematic program of consulting users of statistics about statistical frameworks, surveys, products and analyses. Through this program, government agencies, academic researchers, businesses and business councils, community organisations and individual Australians have told the ABS what they think is important that we measure. In addition, the ABS undertook a wide ranging consultation process as part of the development phase for the first edition of MAP.

In developing this most recent edition of MAP, we have been guided by an Expert Reference Group, comprising a range of government, industry and academic members who are highly regarded in the area of statistical measurement. There are also many international initiatives and statistical precedents that have provided ideas and guidance, for example, the OECD Global Project on Measuring the Progress of Societies (see www.wikiprogress.org).

Go to our [blog](#) to tell us your views on MAP

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About MAP

WHOSE VALUES AND PREFERENCES ARE REFLECTED IN MAP?

Any overall assessment about whether life is getting better is unavoidably based on values and preferences. However, MAP is presented in such a way that the reader is encouraged to draw on their own values when assessing progress. This is because everyone has a different viewpoint. For example, faced with statistics revealing that life expectancy has lengthened during the past decade, average income has risen and more land has been degraded by salinity, one reader may judge there has been progress and another that there has been regress.

Even if all or most Australians valued different aspects of life in much the same way, it would be difficult to summarise the various changes that have occurred over the last decade into a single statement about progress.

For these reasons, MAP presents a range of progress indicators. These are selected because they provide a succinct summary of social, economic and environmental progress, and are carefully chosen in consultation with experts from the very extensive array of statistical measures available in Australia. They have been selected because they encapsulate a range of complex issues in a given area of interest. In particular, the headline indicators are chosen because they inform on pivotal aspects of progress over time.

Choices of this kind must be made otherwise the ABS would simply point readers to their full array of statistical data and invite them to make their own selection of evidence and priorities. Such a course may be suitable for experts, but would be unhelpful to most people.

However, these choices are more strongly driven by considering whether the statistics are unambiguously positive or negative. That is, whether the indicator is moving clearly in a 'positive' direction (signalling progress), clearly in a 'negative' direction (signalling regress) or there is no significant movement. In particular, these statistics were chosen on the basis that most Australians would agree that the change they show can be unambiguously associated with progress or regress.

For more information on the consultation process undertaken in developing MAP see [What process was undertaken in developing MAP?](#) and for information on the selection criteria used when selecting progress indicators see the section on [What is a progress indicator?](#), in particular, [What makes a good progress indicator?](#)

Whether a reader agrees with the ABS choice of headline indicators or not, he or she is free to peruse the whole suite of 12 headline and 71 supplementary indicators in MAP and to assign high weight, low weight or no weight to each, as his or her own values and preferences dictate.

Visit our [blog](#) to provide feedback on the indicators

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About MAP

WHAT IS THE ABS ROLE IN MEASURING PROGRESS?

"Statistical indicators are important for designing and assessing policies aiming at advancing the progress of society, as well as for assessing and influencing the functioning of economic markets. Their role has increased significantly over the last two decades. ... More and more people look at statistics to be better informed or to make decisions."

Stiglitz, Sen and Fitoussi 2009, *Commission on the Measurement of Economic Performance and Social Progress*, Final Report

A national statistical agency like the ABS plays an important role in providing the statistical evidence that allows assessments of progress to be made by those who formulate and evaluate policy, by researchers and by the Australian community. Setting out a suite of social, economic and environmental indicators that aim to measure a country's progress continues to be one of the most important and challenging tasks that a national statistical agency undertakes.

It is a task that has been undertaken by the ABS and other national statistical organisations in some form or another over a long period of time. For example, the ABS developed its program of social indicators in the early 1970s when the OECD launched the 24-nation Social Indicators Program, and has, since then, regularly published a set of in-depth social indicators in Australian Social Trends (ABS cat. no. 4102.0). These indicators have been available for perusal in conjunction with key economic indicators, and, since 1998, with key environment and energy statistics.

However, in response to growing public interest in seeing economic, social and environmental information brought together, the ABS developed MAP which focuses attention on the interrelationships between these areas.

RELATED PAGES

- [Why did the ABS develop MAP?](#)

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About MAP

WHAT IS THE UNDERLYING STRUCTURE OF MAP?

MAP provides a picture of Australia's progress by presenting a range of statistical measures that demonstrate change, grouped under three broad domains: the society, the economy and the environment.

Within these broad domains several dimensions are addressed, such as health and work within the social domain, national income within the economic domain, and biodiversity within the environmental domain.

Within each dimension there are a range of statistical measures presented, known as progress indicators. These indicators together tell a story about the extent of progress within that dimension.

The indicators directly address the notion of progress, but other measures are also included that provide context for the progress information. In addition, for some dimensions information that relate to specific groups of interest, such as older people, men and women, or Aboriginal and Torres Strait Islander peoples is included.

Headline and Supplementary Dimensions

Altogether, MAP has seventeen headline dimensions of progress. These dimensions reflect key aspects of life and are considered important in assessing whether life in Australia is getting better.

In addition, there are five supplementary dimensions. Although not given headline status, these are included in MAP in recognition of their relevance to the progress story.

For a full list of dimensions and indicators see Appendix A.

Contextual Information

This information provides important context to the information summarised in the headline and supplementary indicators. For example, the health dimension headline indicator tells us how long the average Australian is expected to live for, whereas the contextual information provides details on the quality of life such as the number of people living with a disability or the leading causes of death. The contextual information draws out some of the key points underlying the data.

This part of the product is useful for those who relate more easily to text than graphs.

Population Group Information

Rates of progress may differ between various subgroups of the Australian population. Where possible we have included state and territory differences, age and sex differences, data on Aboriginal and Torres Strait Islander peoples and international comparisons. Our commentary draws attention to differences that are particularly noticeable.

International comparison, References and Glossary

International comparisons for the headline and/or supplementary indicator(s) are included for each dimension, where possible. This information is important as it shows where Australia sits internationally.

In addition, every dimension has a list of references and a glossary to explain the terms used in the text.

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About MAP

WHAT APPROACH DID THE ABS TAKE IN PRESENTING PROGRESS DATA?

"Not everything that counts can be counted, and not everything that can be counted counts."

Albert Einstein

There are many ways in which data about progress can be presented. These might be summarised into two main approaches:

- An accounting approach, which provides a set of consistent accounts which can then, if needed, support the production of a single progress indicator, and
- A suite of indicators, or "dashboard" approach, which presents selected informative progress indicators side by side

MAP takes the latter approach - a dashboard approach. It presents data on key aspects of life in Australia and discusses the links between these areas. In this way, readers can review progress across the social, economic and environmental domains and understand the issues unique to each.

The dashboard approach encourages readers to consider the indicators and make their own assessment of whether Australia is, on balance, progressing and at what rate. By comparison, although a useful analytical tool, the accounting approach takes those decisions out of the hands of the general public, by applying weights to each factor in each domain before the data is presented.

In using a dashboard approach, the ABS has avoided the complexity and contestability of a comprehensive accounting system, which is complicated to both compile and interpret, and the potential oversimplification involved in presenting a single progress indicator.

An accounting approach

In an accounting approach, all relevant social, environmental and economic factors would be considered in terms of one measurement unit - usually monetary. Social, economic and environmental "accounts" would then be brought together in one unified system of accounts.

In this approach, the data can be presented in a set of accounts that are consistent with one another, or, because of this consistency, the data can be combined into one or more single numbers. Although this process is mechanically straight forward, it is complicated by the conceptual factors outlined below.

The accounting approach is often put forward when measures of progress are being considered, because it seems like a natural extension of the approach that has long been used to monitor the economy. Many of the ABS Main Economic Indicators released monthly, quarterly or annually are numbers drawn from the internationally applied System of National Accounts (SNA). Readers will be familiar with some of these, such as the Balance of Payments (BOP).

The accounting approach is attractive because it puts all the numbers on the same basis so they relate to one another and can be added together, or aggregated. These aggregate numbers can then be readily monitored to see whether they are increasing or decreasing over time.

The overall information can also be summarised by combining aggregates from different accounts into one number, known as a composite indicator. An example of a composite indicator from the SNA is Gross Domestic Product (GDP). Because composite indicators are fairly easily digested, they lend themselves to publication and media commentary, and can be useful in encouraging debate.

However, composite indicators usually focus on a very particular aspect of life - in the case of GDP, on market production and consumption. Using the analogy of a road map, you might say composite indicators show where the roads are leading - the direction of a given factor - but do not indicate the quality of the road, the ideal route, the depletion of resources used in building the roads, or the scenery.

There are other disadvantages and complexities involved in taking the accounting or single number approach.

First, it is an adaption of a system designed to measure the market economy - a phenomenon that is quite different from the broader economy or the complete environmental and social system that we hope to measure when assessing progress.

In the broader economy, for example, public services such as health care or educational services may not be priced in the same way as private services provided by business for the market. For example, public services are often priced in a way that assists all citizens to access them rather than priced only for market competitiveness. So, the true price of non-market economic activity is unobservable and its outputs are often difficult to identify and therefore measure.

Further, economic goods and services are valued in monetary terms by observing the price paid for these in the market. However, market prices don't unerringly reflect the value of particular goods or services when considered in a wider societal or environmental context (Gittens 2010).

Another complication is that many social and environmental factors are inherently difficult to value in monetary terms. This is partly because these factors are not traded in the market economy - for example, community connectedness or natural habitats and ecosystems. It has only been recently that some environmental resources have been priced in a way that sets their true value in market terms, and there is much contemporary discussion about how other factors affecting environmental wellbeing can be usefully priced, for example, carbon and greenhouse gases.

But it is also because, while unquestionably valuable, such factors are not always material, and therefore able to be put into monetary terms, for example, the quality of human relationships or the beauty of the natural environment.

To allocate a monetary value to intrinsically valuable but "priceless" factors would involve a complex analysis of social values which is difficult to undertake with the objectivity needed for statistical purposes: the ABS is not ideally placed to undertake such analysis.

There are also technical complexities involved in combining a range of social, environmental and economic measures into a single composite indicator or number. The components will usually be measured in different units (e.g. years of life expectancy, dollars of income, numbers of hospital beds, rates of suicide deaths, tonnes of greenhouse gases). Although it may be possible to express these different factors in some common way to make them comparable with one another (e.g. as a rate), this again involves making complex social value judgements about the relative importance of each. For instance, how much money is the rate of infant mortality worth?

There is also the view that aggregate indicators mask important nuances in the information underlying the aggregate, and that a certain level of disaggregation of information is required to inform the community and the government in ways that allow it to respond. For example, it is important to understand health outcomes for sub-populations such as Aboriginal and Torres Strait Islander peoples as well as health outcomes for the total population. It is also important to know the extent to which natural resources are being exhausted, not just whether the production and consumption supported by these resources is growing.

In summary, a comprehensive accounting system across social, economic and environmental domains is complicated to compile and interpret for anyone wishing to quickly form an overall view about Australia's progress. At the same time, the very simplicity of condensing progress into a single number runs the risk of oversimplifying a complex system. There is a danger that a composite indicator will give potentially misleading signals depending on the context in which it is used.

These are some reasons why the ABS has not developed or adopted such a system for measuring progress. Composite indicators can be a valuable complement to summary indicators and the ABS

supports work being undertaken in this field. For instance, the Australian National Development Index sets out to provide a consistent set of social, economic and environmental indicators that can support a single number assessment of Australia's wellbeing in its broadest sense. The Australian National Development Index project will potentially provide a single number that can moderate analysis that currently only has at its disposal narrow economic indicators such as GDP.

A more in-depth analysis of economic accounting in the context of measuring progress can be found in the Final Report by the Commission on the Measurement of Economic Performance and Social Progress by Joseph E Stiglitz, Amartya Sen and Jean-Paul Fitoussi.

A suite of indicators approach

In a suite of indicators approach, different kinds of measures relating to various topics (dollars, numbers, rates, amounts) are presented side by side.

The rationale for using the suite of indicators approach can be summed up by the example of a car dashboard. When travelling from one place to another, a driver needs to understand a number of factors to make informed decisions: for example, the distance travelled, the time taken, the temperature of the engine and the amount of petrol available to continue.

All these factors need to be presented separately to be of value, as combining them into a single number would reduce the driver's ability to understand the variables and make important judgements. For example, an overheating car must be actioned regardless of the amount of petrol left, or the distance travelled.

This is why the suite of indicators approach is often referred to as a "dashboard" approach. MAP uses this approach. It presents data on key aspects of life in Australia side-by-side and discusses the links between them.

The dashboard approach encourages readers to consider the indicators together and make their own evaluations of whether Australia is, on balance, progressing and at what rate. By comparison, accounting approaches take those decisions out of the hands of the general public, by applying weights to each factor before the data is presented.

The suite-of-indicators approach makes no single overall assessment about whether the array of statistical indicators presented implies that life is getting better or worse. Instead, it leaves each individual reader to apply their own values and preferences to the evidence, and to arrive at their own overall assessment of national progress.

Presenting too many disparate indicators together can, however, reduce the effectiveness of the dashboard, as these may not be easily assimilated and weighed against each other. This is why MAP 2010 presents a very reduced set of indicators on its home page, then more detailed data as the reader follows links through the product.

In our view, this approach strikes a balance between the complexity of a larger dashboard or complex accounting system and the potential oversimplification of a single number.

"Too much and too long, we seem to have surrendered community excellence and community values in the mere accumulation of material things. Our gross national product - if we should judge America by that - counts air pollution and cigarette advertising, and ambulances to clear our highways of carnage. It counts special locks for our doors and the jails for those who break them. It counts the destruction of our redwoods and the loss of our natural wonders in chaotic sprawl. It counts napalm and the cost of a nuclear warhead, and armoured cars for police who fight riots in our streets. It counts Whitman's rifle and Speck's knife, and the television programs which glorify violence in order to sell toys to our children. Yet the gross national product does not allow for the health of our children, the quality of their education, or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages; the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage; neither our wisdom nor

our learning; neither our compassion nor our devotion to our country; it measures everything, in short, except that which makes life worthwhile. And it tells us everything about America except why we are proud that we are Americans."

Robert F Kennedy March 18, 1968, Address, University of Kansas

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About MAP

HOW SHOULD THE DASHBOARD ON THE MAP HOME PAGE BE INTERPRETED?

MAP presents approximately 80 headline and supplementary indicators overall. To assist readers in gaining a quick understanding of some of the key points, MAP presents a more compact suite of seventeen dimensions in a dashboard format on the [MAP home page](#). This format shows the change occurring between two points in time: now and about ten years ago. It is only a simple summary of change in that area. However, the dashboard format allows the reader to quickly view all domains of progress at once so they can more readily assess, on balance, whether life in Australia is getting better.

For information about changes that occurred during the last decade, about changes that go back further in time (where possible), or for contextual data, more detailed pages are provided within the relevant section. For example, the more detailed pages provide commentary and information about population groups such as men and women, older people, young people or Aboriginal and Torres Strait Islander peoples.

Go to our [blog](#) to tell us your views on the dashboard system

What is the difference between the dashboard and the more detailed content?

For the indicators on the MAP home page, movement is determined by comparing two data points: 10 years ago with the most recent available data. A "traffic light" (red, green or amber) is then used to demonstrate this movement for each indicator. Those who would like more detail about changes that occurred during the last decade, or about changes that go back further in time, can go to the more detailed pages within the relevant section.

The traffic light system differs from how the headline indicators are presented on the more detailed pages because it looks at change between only two points in time, rather than the history of movements that occurred during the ten year period.

See also [How do I navigate this product?](#)

What do the traffic lights mean?

The traffic light format shows whether the indicator is moving clearly in a 'positive' direction (signalling progress), clearly in a 'negative' direction (signalling regress) or there is no significant movement.

For the headline indicators shown on the MAP home page, the traffic lights indicate:

✔ *Progress has generally been made in this headline indicator compared with ten years ago*
When comparing current data to data for ten years earlier, the change is in a direction which clearly signals **progress** and, where applicable, that change is statistically significant.

✘ *This headline indicator has generally regressed compared with ten years ago*
When comparing current data to data for ten years earlier, the change is in a direction which clearly signals **regress** and, where applicable, that change is statistically significant.

🟡 *There has been no significant movement in this headline indicator compared with ten years ago*
When comparing current data to data for ten years earlier, there is no movement observable or the movements observed in any direction are not statistically significant.

■ *There is either no headline indicator for this area of progress or no series of data covering the ten year period*

For three headline dimensions (Family, community and social cohesion; Democracy, governance and citizenship; and Oceans and estuaries) there is no headline indicator. Crime is also assigned a grey box as there is only data from one point in time available for the current Crime headline indicators (Victims of

personal crime - assault; Victims of household crime - break-ins).

Why have these statistics been highlighted?

The headline indicators on the MAP home page were selected because they summarise very effectively change in the relevant dimension. As discussed in the section [What is a progress indicator?](#), they were also chosen because they show change that is very clearly either positive or negative.

In particular, these statistics were chosen on the basis that most Australians would agree that the change they show can be unambiguously associated with progress or regress.

Is the change shown statistically significant?

The use of the traffic light format is a very powerful visual tool for people to quickly assess whether life in Australia is getting better. Therefore ABS needs to be satisfied that the movement shown is an actual movement and is not the result of 'statistical noise'. As is standard procedure, where appropriate, the ABS has undertaken significance testing to determine whether the movements are statistically significant. Statistical significance means a movement or comparison is not likely to have happened just by chance.

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About MAP

HOW DO I NAVIGATE THIS PRODUCT?

The new electronic format of MAP is intended to enhance accessibility to the data for all Australians, by making it easier and more logical to navigate. It is designed to show the most summarised data on the home page for a quick overview, with more detailed data provided as you follow the links and "drill down" into the product. See below for more information about [What depth of information is available?](#)

For example, the traffic light indicators on the MAP home page are the most summarised data in MAP. From there you can follow links to the dashboard pages. These are more detailed, and present the headline and/or supplementary indicators, as well as commentary and comparisons.

However, the dashboard pages are also intended to be a brief snapshot of progress for the dimension in question. For more detail, from the dashboard pages you can follow links to:



View the commentary - detailed commentary and, where available, a longer time series graph.



View the MAP data - all of the graph data presented in MAP can be downloaded from this link.



View the source data - this link will take you directly to the source website.

Commentary on the indicators and, where available, longer time series can also be accessed through the navigation panel on the left hand side of the screen.

For those wishing to read the entire publication from first to last page, there is an option to select "Next Page" at the bottom of every page. There is also an option to select "Previous Page" if you wish to revisit an earlier page.

Finally, some pages have a "Related pages" section at the bottom of the page which enables the reader to view other pages of interest via the links provided.

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WHAT DEPTH OF INFORMATION IS AVAILABLE?

In summary, the product has information at the following levels of detail:

Level	Format	Description
Overview of all dimensions	Traffic lights	<p>Where available, summary data for all dimensions of the three domains - economic, social and environmental - are displayed at once for a quick overview of the MAP product.</p> <p>The data relates to two points in time only: the beginning and end of the 10 year period.</p>
Overview of specific dimension data	Graphs and summary text (see also Graph features)	<p>"Dashboard" pages</p> <p>Provides a snapshot of the headline and/or supplementary data for each dimension.</p> <p>The graphs plot a series of data points throughout the 10 year period.</p>
Introduction to the dimension	Text	<p>Explains how each dimension relates to progress, discusses ideal progress measures and introduces the indicator commentary.</p>
Commentary on the progress indicators for the dimension	Graphs, tables and text	<p>Discusses why the indicator is important to progress, provides background information and highlights key points.</p> <p>Where possible, the graph(s) show progress over a longer time period than the dashboard pages.</p>
Contextual information for the dimension	Graphs, tables and text	<p>This data is not progress data (e.g. it does not clearly demonstrate progress or regress).</p> <p>The data and commentary here provide useful background information to the progress indicators.</p>

(See also [Contextual information](#))

Population groups information relating to the dimension

Graphs, tables and text

Focuses on population groups of particular interest where there is available data.

E.g. migrants, young people, men and women, and people living in rural or remote areas.

(see also [Population group information](#))

Data cubes

Spreadsheet

All graph data used for a given dimension is provided in an interactive spreadsheet format.

Source data

Website

The link will take you directly to the source website.

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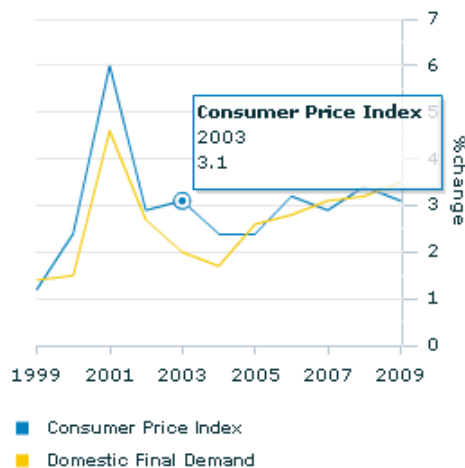
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GRAPHS, DIMENSIONS AND FURTHER INFORMATION

Graph Features

Those wanting a quick figure from the graphs on the dashboard pages can simply hover the mouse over the graph above the timing point of interest. As illustrated in the graphic below, the figure will appear in a small box.

CPI(a) and DFD chain price index(b)



Footnote(s): (a) Annual average. (b) Percentage change from previous year ending 30 June.

Source(s): [ABS Consumer Price Index, Australia, March quarter 2010 \(cat. no. 6401.0\)](#); [ABS Australian System of National Accounts, 2008-09 \(cat. no. 5204.0\)](#)

Go to our [blog](#) to tell us your views on these features

Headline and Supplementary Dimensions

Altogether, MAP has seventeen headline dimensions of progress. These dimensions reflect key aspects of life and are considered important in assessing whether life in Australia is getting better.

In addition, there are five supplementary dimensions. Although not given headline status, these are included in MAP in recognition of their relevance to the progress story.

For a full list of dimensions and indicators see Appendix A to full list.

Contextual Information

This information provides important context to the summarised information at higher levels in the product. For example, it sets out the relationship of the data to the social, economic or environmental issues of concern in each dimension.

It also draws out some of the key points underlying the data and, where necessary, explains where the data is problematic or where new data may become available soon.

This part of the product is useful for those who relate more easily to text than graphs.

Population Group Information

Rates of progress may differ between various subgroups of the Australian population. Where possible we have included state and territory differences, age and sex differences, data on Aboriginal and Torres Strait Islander peoples and international comparisons. We do not draw attention to every difference, nor do we systematically compare progress between men and women, between Aboriginal and Torres Strait Islander peoples and other Australians, or between other groups of people. However, the commentary draws attention to differences that are particularly noticeable.

International comparisons, References and Glossary

International comparisons for the headline and/or supplementary indicator(s) are included for each dimension, where possible. This information is important as it shows where Australia sits internationally.

In addition, every dimension has a list of references and a glossary to explain the terms used in the text.

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About MAP

HOW IS 'PROGRESS' DEFINED IN MAP2010?

"No single idea has been more important than the idea of progress in Western civilisation for three thousand years."

Nisbet 1980, *History of the Idea of Progress*, New York: Basic Books

The concept of progress is central to MAP. In its broadest sense, we define progress to be synonymous with life getting better. In addressing this concept, MAP 2010 examines many aspects of people's lives, for example, their health, the quality of their environment, their incomes, work and leisure, security from crime, and so on.

That is, we acknowledge that progress is multidimensional. Whether or not we are progressing depends on all of these factors: on the state of our environment, the health of our economy and a variety of areas of individual and societal wellbeing. And so measures of progress for each dimension are necessary.

In MAP 2010, we do not make a statement about whether Australia is on balance progressing, or at what rate it is progressing. Instead, we present the information in such a way that readers can consider the relative importance of progress in each dimension and bring their own personal evaluations to these questions.

However, this edition of MAP includes a special article on [Future directions for measuring Australia's progress](#), and we encourage those who are interested to read this, particularly the section on **Defining "progress"**. The article discusses some current thinking about how progress can best be defined. In particular, the article emphasises that when measuring progress we need to ensure we are measuring what Australians care about.

The [MAP blog](#) is now open, if you would like to contribute to the discussion raised in this article, or on any other aspect of MAP.

Go to our [blog](#) to discuss how to define progress in a way that leads to meaningful statistics

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About MAP

WHAT IS A PROGRESS INDICATOR?

"Statistical indicators are the structural DNA codes of nations. They reflect a society's values and goals and become the key drivers of economic and technological choices"

Hazel Henderson, initiator and co-sponsor of the Calvert-Henderson Quality of Life Indicators.

Statistical indicators

Statistical indicators encapsulate major features of aspects of Australian life. For example, life expectancy is a statistic that gives a quick indication of the state of the population's health. Indicators, however, are just an "indication" - a pointer - that observers can use to gain insight into a topic. Generally, a suite of indicators is needed to really understand the context, dynamics and interrelationships occurring within an area.

For example, the ABS publication Australian Social Trends presents a suite of social indicators that together give a very detailed picture of Australian life. The ABS also publishes Key National Indicators which brings together a range of main economic indicators from the National Accounts (e.g. Gross Domestic Product and the Consumer Price Index) as well as demographic and labour force information in the form of key indicators (e.g. the estimated resident population (ERP) and the unemployment rate).

Ideally, one advantage of statistical indicators is that they represent key aspects of a complex reality in an informative way. The data can then be used to give direction to community activity, government policy, or further research.

A good statistical indicator will generally meet the following criteria:

- be relevant to the particular area of life in question
- be summary in nature
- be supported by timely data of good quality
- be capable of disaggregation by, say, geography or population group
- be intelligible and easily interpreted by the general reader.

Progress indicators

Progress indicators are summary statistics that reflect a central idea in a given aspect of life, but they are specially chosen because they demonstrate clear positive or negative movement over time. That is, when the data points are plotted on a graph showing change over time, observers can see the aspect of life is moving clearly in a 'good' direction (signalling progress), clearly in a 'bad' direction (signalling regress) or there is no significant movement. In particular, progress indicators are chosen on the basis that most Australians would agree that the change they show can be unambiguously associated with progress or regress.

Progress indicators also need to be statistics that relate to outcomes rather than inputs. For example, life expectancy is a progress indicator, because it meets the above criteria, but also relates to a health outcome: longer or shorter life spans. An example of an input indicator for the area of health is the number of General Practitioners per capita. This kind of indicator shows a factor that contributes to health outcomes, but does not directly tell us whether people are getting healthier. For a full suite of input as well as outcome measures in the area of health, go to Australian Social Trends.

MAP also focuses on indicators of progress that can be objectively measured, such as life expectancy and educational qualifications. We have tended to avoid indicators that are intrinsically subjective (for example, statistical measures of happiness). We have also avoided areas that do not at present have generally agreed measures (for example, political freedom). These aspects of life are clearly important to Australians, but statisticians and other experts have not yet completed the work needed to ensure these concepts can be captured numerically in a meaningful way.

For example, happiness can be understood in so many different ways that it is difficult to develop a set of survey questions that capture people's experience in a reliable, repeatable way. It requires extensive cognitive and field testing, and methods will improve only after many trials of this kind have been undertaken.

Go to our [blog](#) to tell us your views on MAP's progress indicators

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WHAT MAKES A GOOD PROGRESS INDICATOR?

"To estimate the value of Newton's discoveries, or the delight communicated by Shakespeare and Milton, by the price at which their works have sold, would be but a poor measure of the degree in which they have elevated and enchanted their country"

Thomas Malthus, 1766-1834.

When deciding which statistical indicators should be used to encapsulate each aspect of Australian life, we did not always have a comprehensive or longstanding body of advice to rely upon. For some aspects – health, crime, income, productivity and air quality, for example – there is already broad consensus regarding effective indicators of progress. But for other aspects – social capital, knowledge and innovation, inland waters and waste, for example – the effort to develop statistical indicators is more recent, and stakeholder agreement has not always been reached.

As a result, during the development of the first edition of MAP, the ABS undertook wide-ranging consultation with experts and the general community of users regarding indicators that would be ideal for each aspect of Australian life and, where these were not available, what indicators would provide the best approximations to those ideal indicators.

Our first step was to take each dimension of progress in turn, and to ask 'Why is this dimension particularly important to Australia's progress? What are the key facets of progress in that dimension that a headline indicator should seek to express?'

In developing the MAP headline indicators, we determined that a good headline progress indicator should meet all the criteria outlined above for statistical indicators generally, but also some others relating particularly to the concept of progress. That is, a good progress indicator must generally:

- be relevant to the particular area of life in question - in this case to the dimension of progress
- be summary in nature
- be supported by timely data of good quality
- be capable of disaggregation by, say, geography or population group
- be intelligible and easily interpreted by the general reader

but it should also:

- be available as a time series of data over an appropriate time period (in the case of MAP, ten years)
- where possible, focus on outcomes for the dimension of progress (rather than on say, the inputs or processes used to produce outcomes)
- show a 'good' direction of movement (signalling progress) and 'bad' direction (signalling regress) - at least when the indicator is considered alone, with all other dimensions of progress kept equal
- be sensitive to changes in the underlying phenomena captured by the dimension of progress

A small set of headline progress indicators cannot paint a full picture of progress, and so supplementary progress indicators were included. Supplementary indicators give more information about the dimension of progress in question. We applied similar criteria when choosing the supplementary indicators but did not require that every supplementary indicator show unambiguously 'good' or 'bad' direction of movement or have an outcome focus.

RELATED PAGES

- What is the underlying structure of MAP?

ARE THE INDICATORS RELATED TO ONE ANOTHER?

Each aspect of progress is related, either directly or indirectly, to most of the others. Change in one dimension of progress is typically accompanied by change elsewhere. Therefore it is important to consider the full array of indicators together.

Broadly, we may think of two types of relationships between different areas of progress – trade-offs and reinforcements.

Trade-offs occur when one area of progress improves at the expense of another. In some cases, trade-offs arise after a change of policy or preference. For example, spending on education might be cut to give more money to health. But they also occur as flow-on effects: for example, as economic activity rises so might greenhouse gas emissions.

Reinforcements occur when one aspect of progress improves and strengthens another. For example, as economic production rises, so might employment.

In reality, the overall effect of a change in any one dimension is much more complex. An intricate system of trade-offs and reinforcements comes into play when any dimension of progress changes. For example, suppose factory output increases. This generates more income, and so there is more money to pay for, say, health care. But increased factory output might also increase air pollution, which is harmful to people's health or might be detrimental to other economic activity such as agriculture.

The special article on [Future directions for measuring Australia's progress](#) included in this edition of MAP contains some more discussion about trade-off and reinforcement relationships.

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WILL THE INDICATOR REMAIN RELEVANT OVER TIME?

The MAP headline indicators form a core set of statistics for reporting on Australia's progress. However, over time, they may change as social priorities change, and as new indicators are developed. Such indicators may be improved measures for existing areas we already measure or may be able to shed light on new areas, such as happiness, political freedom, or human capital.

National and international thinking about what is important when measuring the progress of societies has developed rapidly over the last decade. In particular, attention on this topic has accelerated over the last few years. For example, in 2009, the Australia 2020 Summit discussed the need for improved indicators of progress, and the G20 Summit encouraged work on measurement methods that better take into account the social and environmental dimensions of economic development.

Key events and developments are outlined in our [progress time line](#), which illustrates the increasing focus that both governments and communities are bringing to this topic.

In response to this growing interest, the ABS has included a special article in this edition of MAP, addressing [Future directions for measuring Australia's progress](#). This essay outlines a new approach that aims to determine whether, in MAP, we are measuring what Australians care about. It re-casts the current MAP measures and structure to more specifically focus on this question.

We encourage readers to browse this article and provide comments on it on our online [blog](#).

Conceptual developments in the area of measuring Australia's progress will be ongoing and the ABS hopes the current edition of MAP, and the new approach outlined in the feature article, address contemporary concerns and prepare the ground for responding to future statistical needs in this area.

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WHAT ARE THE LIMITATIONS OF MAP?

MAP does not include indicators for every aspect of progress that may be significant to Australia. This is partly because some areas of progress are inherently subjective and hence difficult to measure reliably. In other cases, there is no consensus about the statistical definitions that best describe the concept we want to measure, or the necessary statistical development hasn't been completed.

Ultimately, MAP is intended to complement the full array of statistics available in Australia, and the ABS hopes many readers will be led to access other publications that can provide more detailed information on the aspects of society, the economy and the environment that particularly interest them.

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REFERENCES

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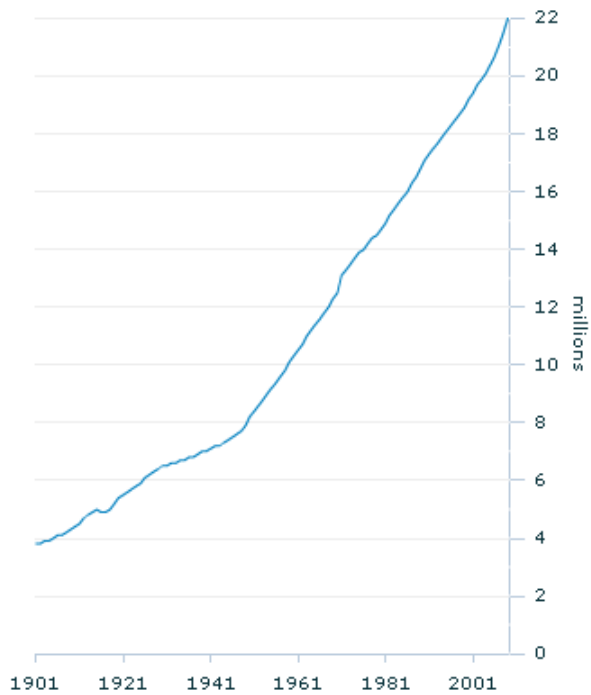
Stiglitz, J, Sen, A and Fitoussi, J-P 2009, Report by the Commission on the Measurement of Economic Performance and Social Progress, viewed 2 September 2010 <www.stiglitz-sen-fitoussi.fr>

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Population

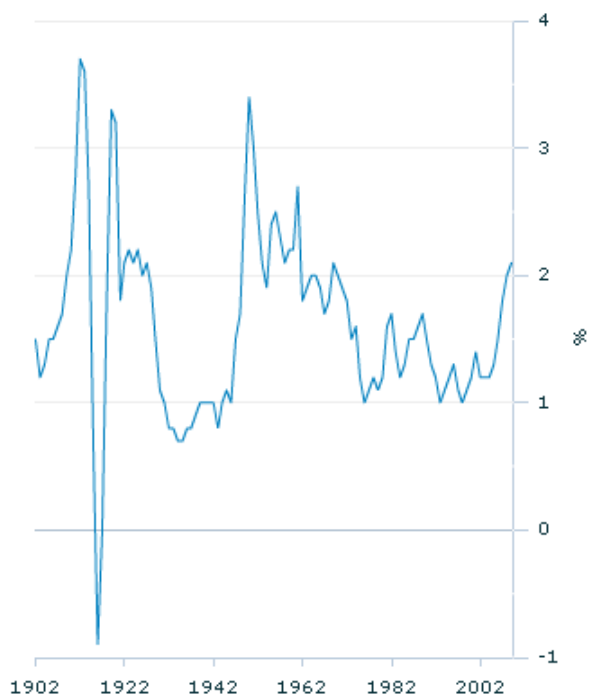
Australia's population(a)



Footnote(s): (a) At 30 June.

Source(s): ABS Australian Demographic Statistics (cat. no. 3101.0); ABS Australian Historical Population Statistics (cat. no. 3105.0.65.001)

Population growth rate(a)



Footnote(s): (a) Year ending 30 June.

Source(s): ABS Australian Demographic Statistics (cat. no. 3101.0); ABS Australian Historical Population Statistics (cat. no. 3105.0.65.001)

POPULATION

The number of people who usually live in Australia, together with their demographic characteristics and their distribution across the country, is an important influence on many dimensions of progress. Similarly, many dimensions of progress influence the size and shape of Australia's population.

This commentary provides contextual information about the population and explains some of the links between changes in population and dimensions of progress.

At June 2009, Australia's resident population was estimated at 22.0 million people. The population has increased by more than 18 million since 1901, when it was recorded at 3.8 million.

Australia's annual population growth rate for the year ending June 2009 was 2.1%, its highest level since the introduction of the concept of estimated resident population (ERP) in 1971. Throughout the 1990s and early 2000s, the annual population growth rate was much lower than its current level, not surpassing 1.5% until the year ending June 2007. The lowest population growth rates were recorded during the First World War in 1916 (-0.9%) and 1917 (0.0%), but the Great Depression and the Second World War also resulted in relatively low population growth rates (between 0.7% and 1.1% during the 1930-1946 period). Population growth rates were at their highest immediately prior to, and after, the First World War (3.7% in 1912, 3.6% in 1913 and 3.3% in 1919) and during the 'baby boom' following the Second World War (peaking at 3.4% in 1950 and at 2.7% in 1961).

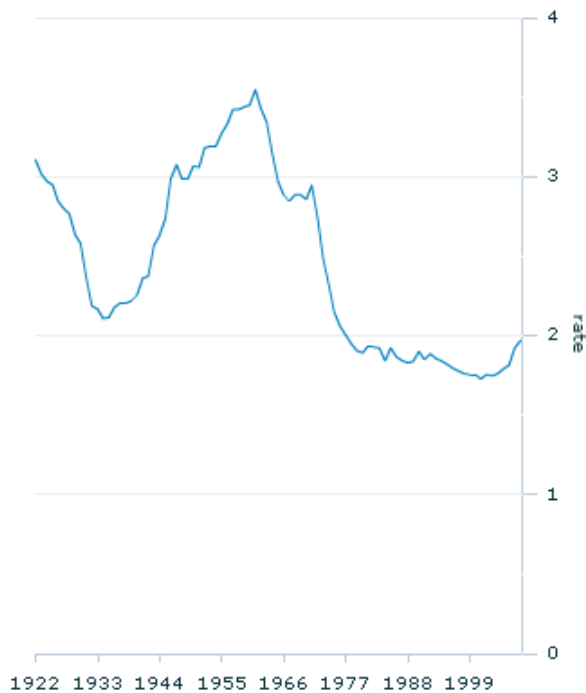
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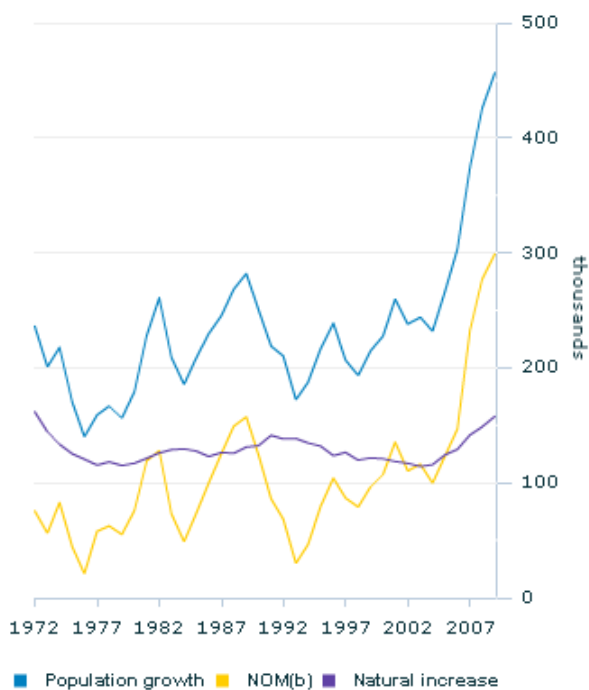
Total fertility rate(a)



Footnote(s): (a) At 30 June.

Source(s): ABS Births, Australia 2008 (cat. no. 3301.0); ABS Australian Historical Population Statistics (cat. no. 3105.0.65.001)

Components of population growth(a)



Footnote(s): (a) Year ending 30 June. (b) Contains a break in series at 30 June 2006. See NOM in the Population glossary.

Source(s): ABS Australian Demographic Statistics (cat. no. 3101.0); ABS Australian Historical Population Statistics (cat. no. 3105.0.65.001)

COMPONENTS OF POPULATION GROWTH

Population growth is made up of two components - natural increase (the difference between births and deaths) and net overseas migration (NOM).

From 1901 to 2008, Australia's death rate almost halved, from 12.2 to 6.7 deaths per 100,000 population (ABS 2009a; ABS 2008a). While this trend has had an influence on Australia's natural increase, fluctuations in fertility rates are another main factor.

In 1921, the total fertility rate projected around 3.1 children per woman in her lifetime, based on age-specific fertility rates at the time. During the Great Depression, the total fertility rate declined to 2.1 children (in 1934). At the height of the baby boom in 1961, Australia's fertility rate was 3.5 babies per woman. Since that time, fertility has declined as women have had more control over their fertility (such as access to birth control and abortion) as well as changes in attitudes surrounding the role of women in society. The greater opportunities women have to pursue education and employment have resulted in many women delaying having children or even choosing not to have them. The total fertility rate reached a low of 1.73 in 2001 and more recently we have seen an increase in fertility rates to 1.97 in 2008, the highest level since 1977. Despite an increase over the last decade, the total fertility rate remains below the replacement level of 2.1 babies per woman (the number of babies a woman would have to have over her lifetime to replace herself and her partner).

Overseas migration plays an important role in Australia's continuing population growth, explaining a sizable proportion of our population increases in recent decades. The actual level of net overseas migration varies from year to year, being influenced by government policy as well as by political, economic and social conditions in Australia and the rest of the world. Net overseas migration grew from 96,000 people in the year ending June 1999 to a high of 299,000 people in the year ending June 2009. Since 1999, the contribution of Net overseas migration to Australia's annual population growth has fluctuated between 43% and 65%, being at the higher end of this range over the last three years (ABS 2010; ABS 2008a).

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POPULATION COMPOSITION AND AGEING

The age structure of Australia's population has changed significantly over the last century. A decline in fertility rates, and increases in life expectancy have seen the median age rise from 22.5 years in 1901 to 36.9 years in 2009. Children under 15 years made up 19% of the population in 2009, compared with 35% in 1901. Conversely, in 1901 60% of the population were aged 15-64 years (often referred to as the 'working age' population), but this proportion had increased to 68% by 2009. The proportion of the population in older age groups also increased, from 4% in 1901 to 13% in 2009 for those aged 65 years or over, and a similar pattern was seen for those aged 85 years or over - rising from 0.1% in 1901 to 1.7% in 2009 (or from 4,200 to 379,400 people aged 85 years or over). As a consequence, the dependency ratio, has decreased from 64 to 48 people outside the 'working age' for every 100 inside it.

The balance between men and women has also changed. In 1901 there were 110 males for every 100 females (in part due to the relatively high proportion of Australian immigrants who were male) (ABS 2008a). This gap has closed. In 2009, there were slightly fewer males than females in Australia (99.2 males for every 100 women). However, this sex ratio did differ by age. In 2009, the sex ratio at birth was approximately 105 males per 100 females. Higher male mortality rates resulted in the ratio being about even for the 30-64 years age group (98.8 males per 100 females) and decreasing markedly above the age of 65 years (83.8 males per 100 females) (ABS 2009b). Net overseas migration can also influence the sex ratio, especially in the younger working ages where there is often a greater proportion of male migrants.

For a more detailed view of the changing age and sex structure of the Australian population try out the ABS animated population pyramids.

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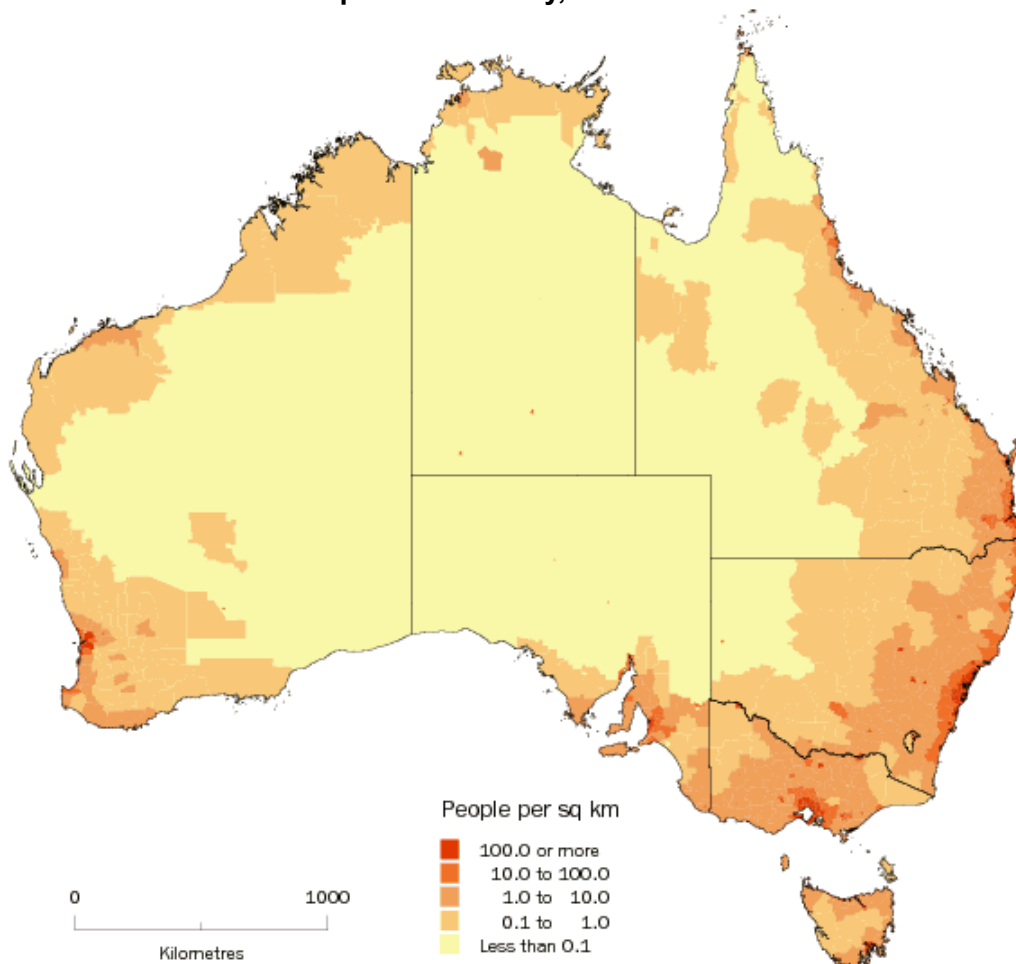
POPULATION DISTRIBUTION

Australia is large in area, and compared with other countries its population is small relative to its size. For every square kilometre of land there are, on average, around three Australians (a similar rate to both Iceland and Canada) (OECD 2009). But this statistic hides the fact that Australia is a highly urbanised nation, with most of the population concentrated in two widely separated coastal regions. The larger of these is the east to south east region, the smaller lies in the south-west of the continent.

New South Wales is the country's most populous state, accounting for almost one-third of Australia's population at June 2009. Of all Australia's states and territories, the population of Queensland grew the fastest between 1999 and 2009 (by 26%), and the population of Western Australia was the next fastest, growing by 21%. Tasmania had the slowest population growth over the period at 7% (ABS 2010; ABS 2008a).

From Federation until 1976, the percentage of Australians living in capital cities increased steadily from a little over one-third (36%) to almost two-thirds (65%). Since 1977 this proportion has stayed relatively stable at 64% (ABS 2008a).

Population density, Australia - June 2009



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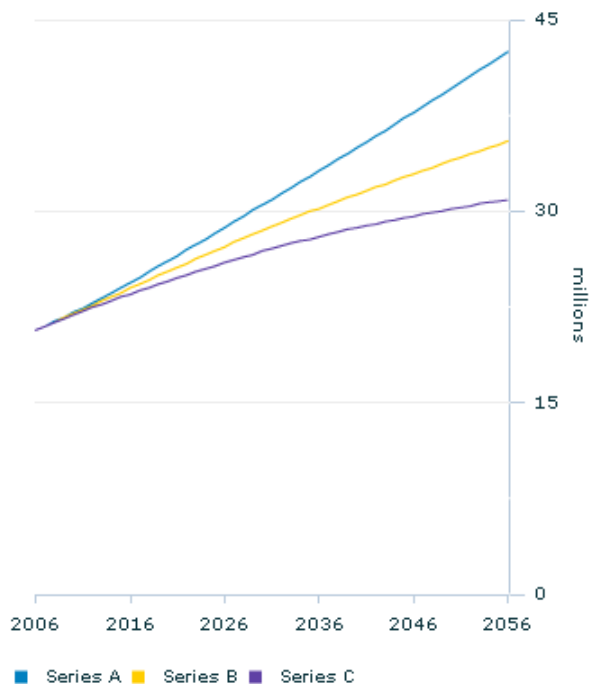
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Population projections(a)



Footnote(s): (a) At 30 June.

Source(s): ABS Population Projections, Australia, 2006 to 2101 (cat. no. 3222.0)

POPULATION PROJECTIONS

Changes in the size, composition and distribution of the population are partly a product of prevailing social and economic conditions. Likewise, the structure and size of the population contribute to the shaping of the economy, society and the broader environment, ultimately influencing wellbeing for better or worse. While we cannot know with any certainty what Australia's future holds in terms of migration, fertility rates and life expectancy, we can model or project population growth and population change using a range of assumptions. In 2008, the ABS released population projections based on population estimates and various assumptions of fertility rates, migration and life expectancy. The three main projections, Series A, B and C, are used to provide the ranges discussed in this text (see the table at the bottom of this page for a summary of the assumptions) (ABS 2008b).

Australia's population in June 2006 of 20.7 million people is projected to increase to 35.5 million in 2056 and 44.7 million by 2101 (according to the Series B projection, which most closely reflects recent trends). Depending on the assumptions used, the population could increase to between 30.9 and 42.5 million in 2056 and to between 33.7 and 62.2 million by 2101.

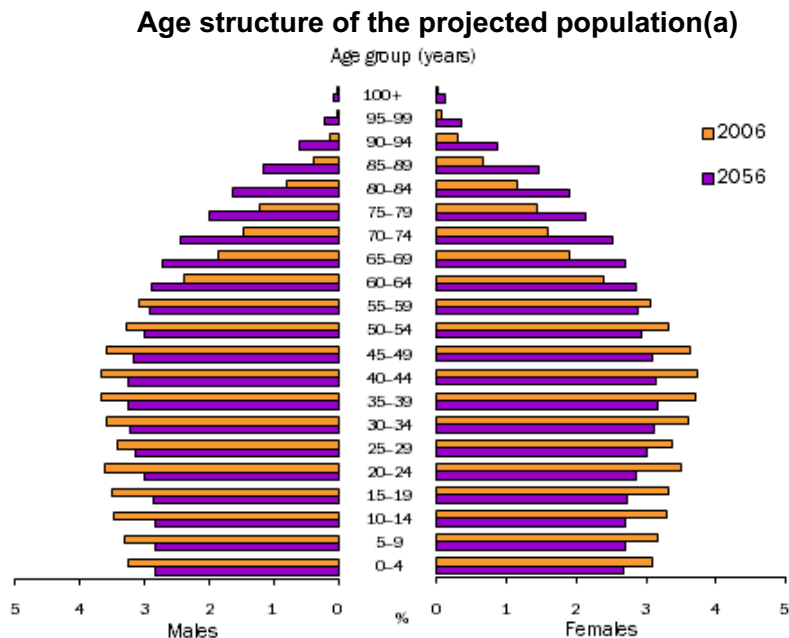
These population projections show the 'ageing' of the Australian population continuing into the future. The median age of Australia's population is projected to increase from 36.6 years in June 2006 to between 41.9 and 45.2 years in 2056.

In each of the three main projections there is a significantly greater proportion of people aged 65 years and over in 2056, rising from 13% in 2006 to between 23% and 25% in 2056. The proportion aged 85 years and over is projected to increase from 1.6% in 2006 to between 4.9% and 7.3%. This is accompanied by the proportion of people aged 15-64 years (the 'working-age' population) declining from 67% in 2006 to between 58% and 60% in 2056.

As a consequence, the dependency ratio is projected to increase from 48 in 2006 to between 65 and 73 in

2056. Put another way, for each person outside the working age population in 2006, there were 2.1 working-age people, while in 2056, it is projected that there could be fewer than 1.5 working-age people for each person outside that age group. This ageing of the population may lead to lower labour force participation rates while also placing greater demand on health care and aged services.

The ABS animated population pyramids demonstrate the past and future projected ageing of the Australian population.



(a) At 30 June. Series B population projection.
Source: ABS Population Projections, Australia, 2006-2101 (cat. no. 3222.0)

Assumptions used for ABS population projections

			Assumptions
Series	Total fertility rate	Life expectancy at birth	Net overseas migration
A	TFR of 2.0 babies per woman from 2021 onwards	Increasing to 93.9 years for males and 96.1 for females by 2056 and remaining constant thereafter.	220,000 people per year from 2011 onwards
B	TFR of 1.8 babies per woman from 2021 onwards	Increasing to 85.0 years for males and 88.0 for females by 2056 and remaining constant thereafter.	180,000 people per year from 2008 onwards
C	TFR of 1.6 babies per woman from 2021 onwards	Increasing to 85.0 years for males and 88.0 for females by 2056 and remaining constant thereafter.	140,000 people per year from 2011 onwards

Source: ABS Population Projections, Australia, 2006-2101 (cat. no. 3222.0)

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ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLES

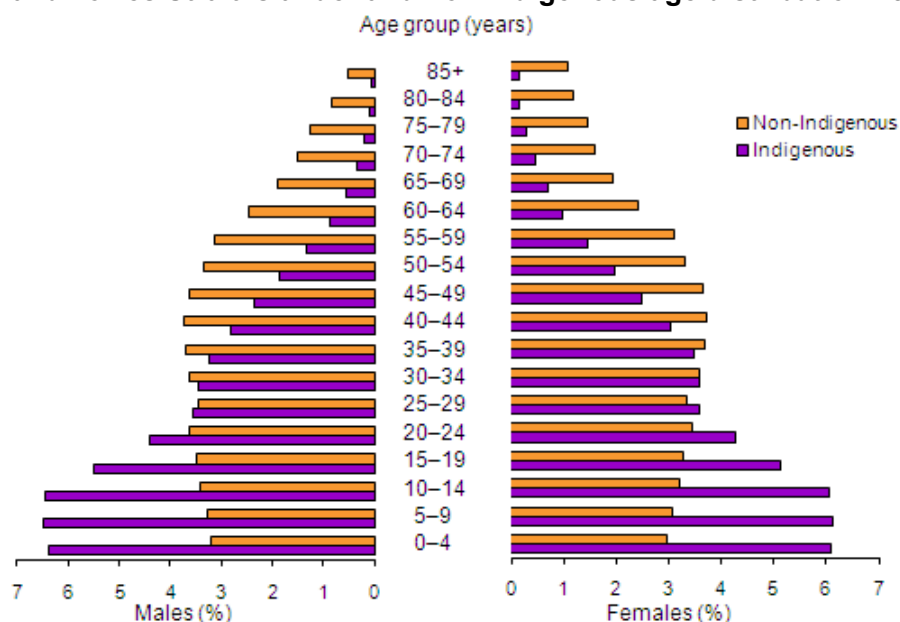
Over recent decades, changing social attitudes, political developments, improved statistical coverage and a broader definition of Aboriginal or Torres Strait Islander origin have all contributed to the increased likelihood of people identifying as being of Aboriginal or Torres Strait Islander origin.

The Aboriginal and Torres Strait Islander population of Australia was estimated to be 517,000 people at 30 June 2006, or 2.5% of the total Australian population. In 2006, around 90% of Aboriginal or Torres Strait Islander peoples identified as being of Aboriginal origin, 6% identified as being of Torres Strait Islander origin and 4% identified as being of both Aboriginal and Torres Strait Islander origin. The Aboriginal and Torres Strait Islander population is relatively young, with a median age of 21 years compared to 37 years for the non-Indigenous population in 2006.

In 2006, around one-third (32%) of the Aboriginal and Torres Strait Islander population lived in major cities of Australia, 43% in regional areas and 25% in remote areas. The majority of Aboriginal and Torres Strait Islander peoples live in New South Wales (30% of the Aboriginal and Torres Strait Islander population lived in this state), Queensland (28%) and Western Australia (14%). While 12% of Aboriginal and Torres Strait Islander peoples live in the Northern Territory, they do make up almost a third (30%) of the total Northern Territory population. In all of the other states and territory Aboriginal and Torres Strait Islander peoples make up less than 4% of the total population.

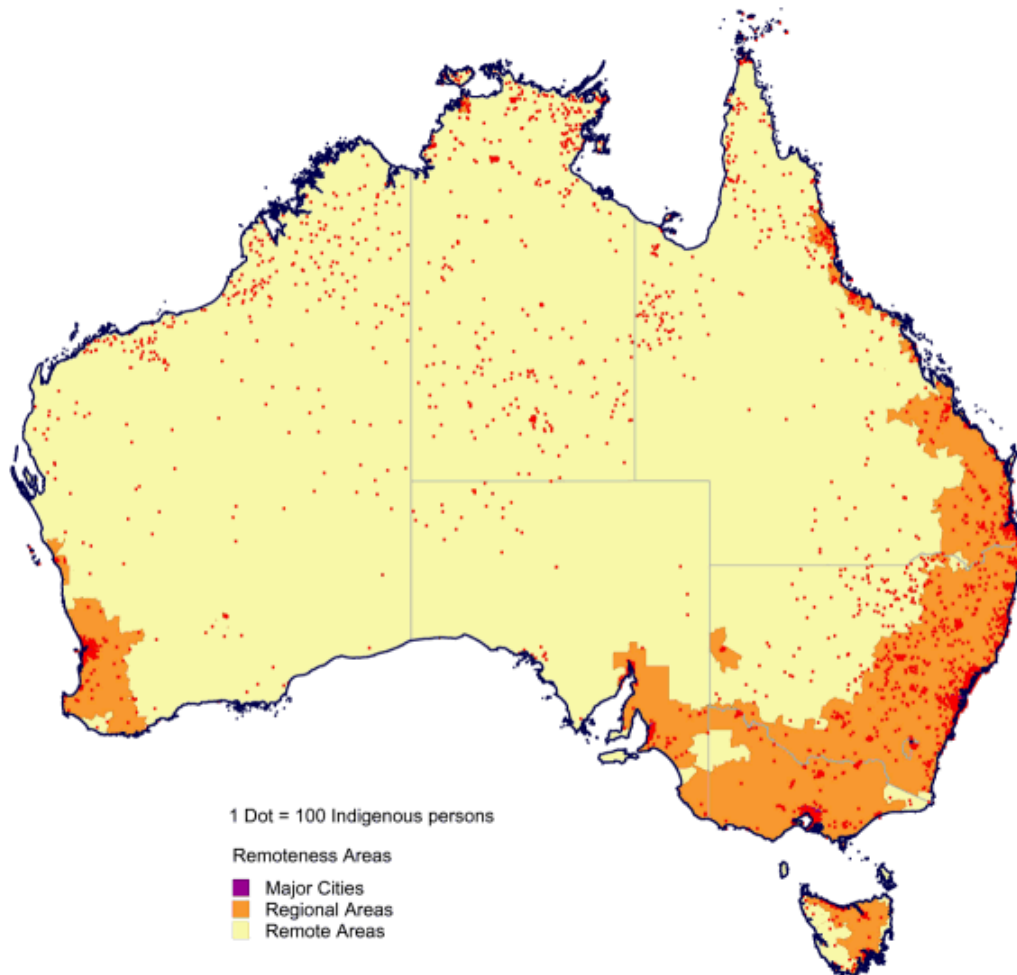
The latest ABS projections of Australia's Aboriginal and Torres Strait Islander population show an increase from 517,000 people in 2006 to between 713,300 and 721,100 people in 2021. The projected average annual growth rate of the Aboriginal and Torres Strait Islander population between 2006 and 2021 is 2.2%, much higher than the same rate for the total Australian population (1.4%) (ABS 2010).

Aboriginal and Torres Strait Islander and non-Indigenous age distribution - 30 June 2006



Source: ABS Experimental Estimates of Aboriginal and Torres Strait Islander Australians, Jun 2006 (cat. no. 3238.0.55.001).

Aboriginal and Torres Strait Islander population distribution - 2006(a)



(a) Final estimates based on the 2006 Census of Population and Housing.
Source: ABS data available on request, Australian Demographic Statistics (cat. no. 3101.0)

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OVERSEAS BORN POPULATION

Australia, along with New Zealand, Canada and the United States, is often described as a 'settlement country'. All four countries have experienced positive net overseas migration in recent years (OECD 2010). These countries have relatively high proportions of the population who were born overseas, when compared with other OECD countries. Australia has the highest proportion aside from Luxembourg, where over one third of the population are foreign-born.

Foreign-born in selected OECD countries - 1997 and 2007

Country	Percentage of population	
	1997	2007
Australia	23.3	25.0
Canada	17.7	20.1
Finland	2.2	3.8
Italy(a)	2.1	5.8
Japan(a)	1.2	1.7
Luxembourg	31.9	36.2
Mexico(b)	0.4	0.4
United Kingdom	7.2	10.2
United States	10.7	13.6

(a) Foreign population rather than foreign-born population.

(b) Data for Mexico are for 1995 and 2005.

Source: OECD, OECD in Figures 2009

Australia has experienced successive waves of immigration over the past century, and each wave has been characterised by a different predominant region of origin, usually related to world events of the period. In the post Second World War period, immigration from Europe increased markedly. In recent times, the proportion of Australians who were born in European countries has declined. As those earlier immigrants have grown older and returned to their country of origin or died, current levels of immigration from these regions have not been high enough to replace them. However in 2007-08, North-West Europe and Southern and Eastern Europe were still the most common regions of birth for Australians born overseas (7.2% and 3.8% of all Australians were born in these regions). The proportion of Australians who were born in the various regions of Asia has continued to increase over the last decade, part of a trend that began in the late 1970s.

Regions of birth, Proportion of Australia's population, 30 June - 1999 and 2009

	1999 %	2009(a) %
Australia	76.9	73.5
Oceania and Antarctica (excl. Aust.)	2.4	3.0
North-West Europe	7.9	7.2
Southern and Eastern Europe	4.6	3.8
North Africa and the Middle East	1.2	1.5
South-East Asia	2.8	3.4
North-East Asia	1.6	2.8
Southern and Central Asia	0.9	2.3
Americas	0.9	1.1
Sub-Saharan Africa	0.7	1.3

(a) Estimates for 2008-09 are preliminary.

Source: ABS Migration, Australia, 2008-09 (cat. no. 3412.0)

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Population

LINKS BETWEEN POPULATION AND PROGRESS

The size and composition of Australia's population influence, and in turn are influenced by, many aspects of progress.

The size and distribution of the population influence democracy in Australia by determining the number of seats in the House of Representatives. As the population changes, this leads to changes in the number of seats allocated to each Australian state and territory.

The population's geographic and age distribution influences the labour market. Changes in the labour market, in turn, can influence the geographic distribution of the population, by encouraging people to move to where they can find employment.

The proportion of the population that is employed provides a broad indicator of the degree of economic dependency in Australia - the relative sizes of the total population and of that part of the population engaged in paid work. Economic dependency may increase owing to, say, a rise in the number of unemployed or the number of people in retirement.

Changes in patterns of mortality, fertility and migration lead to changes in the age distribution of the population. This in turn contributes to changes in the demand for health and other services. As an example, the current ageing of the population partly reflects an increase in life expectancy, and is contributing to an increasing demand for aged care services.

Where people live also has important effects on the environment. Concentrating people within an area can have localised environmental effects, such as air pollution in cities. The concentration of people in the coastal areas of south-eastern Australia has also resulted in relatively high rates of land clearing for urban development, together with the need to provide water, sewerage and landfill sites. This urban expansion tends to occur in Australia's more fertile areas leaving less land available for preservation or agriculture. Conversely, some remote and sparsely populated areas have seen decreasing populations over the last decade. This has generally been characterised by declining numbers of young people in these areas and ageing of the local populations. Such population decreases are often associated with a decline in employment prospects and access to services, but may also be associated with impacts of drought.

Some Australians believe the population should grow quickly to reach substantially higher levels by the end of this century - they point to the economic and other benefits not just of a larger population but also of a growing population. An additional argument for continuing population growth states that such growth is important in increasing and maintaining Australia's national security (Sheridan 2010).

Other Australians are of the view that our environment cannot sustain a significantly larger population with a resultant higher level of consumption (Sustainable Population Australia 2010). Such a view would argue that economic progress should be generated mainly through productivity enhancements, rather than just through an increase in the scale of economic activities. This focus on sustainability acknowledges the need to maintain given lifestyle now without reducing the capacity for future generations to enjoy comparable lifestyles.

Two of the environmental arguments advanced for stabilising our population are:

- the limited amount of land suitable for agriculture; and
- our climate patterns, and in particular the limited amount of rainfall.

Arguments raised to counter these two views include the following:

- Australia's agricultural industry already produces more than we need, being a strong exporter; and
- in 2004-05, just under two-thirds of water consumption in Australia was by agriculture (65%), rather than directly by Australian households (11%) (ABS 2006).

Current ABS population projections indicate that Australia's population could range between 30.9 and 42.5

million people by 2056, if various assumptions for fertility, mortality and net overseas migration were to hold. The population would have an older profile and there would be more older people not in the labour force per adult in paid work. The proportion of the total population aged between 15 and 64 could decline from 67% in 2006 to less than 60% by 2056, according to the ABS projections (ABS 2008b).

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POPULATION GLOSSARY

Dependency ratio

The dependency ratio is a measure used to compare the size of the working age population to the size of the non-working age population, calculated as the sum of people aged 0-14 and 65 years and over (that is, 'dependents') divided by the number of people aged 15-64 years, multiplied by 100.

Estimated resident population (ERP)

ERP, the official measure of the population of Australia, is based on the concept of residence and was introduced in 1971. Prior to 1971, estimates of the population were based on the number of people actually present in Australia. ERP refers to all people, regardless of nationality or citizenship, who usually live in Australia, with the exception of foreign diplomatic personnel and their families. It includes usual residents who are overseas for less than 12 months. It excludes overseas visitors who are in Australia for less than 12 months.

Estimates of the Australian resident population are generated on a quarterly basis by adding natural increase (the excess of births over deaths) and net overseas migration (NOM) occurring during the period to the population at the beginning of each period. This is known as the cohort component method and can be represented by the following equation:

$$P_{(t+1)} = P_{(t)} + B - D + \text{NOM}$$

where $P_{(t)}$ is the estimated resident population at time point t , $P_{(t+1)}$ is the estimated resident population at time point $t+1$, B is the number of births occurring between t and $t+1$, D is the number of deaths occurring between t and $t+1$, and NOM is the net overseas migration occurring between t and $t+1$.

For state and territory population estimates, an additional term is added to the equation representing net interstate migration occurring between t and $t+1$, represented by the following equation:

$$P_{(t+1)} = P_{(t)} + B - D + \text{NOM} + \text{NIM}$$

Natural increase

Excess of births over deaths.

Net overseas migration (NOM)

Net overseas migration is the net gain or loss of population through immigration to Australia and emigration from Australia. It is:

- based on an international traveller's duration of stay being in or out of Australia for 12 months or more;
- the difference between the number of incoming travellers who stay in Australia for 12 months or more, who **are not** currently counted in the population, and are then added to the population (NOM arrivals); and the number of outgoing travellers (Australian residents and long-term visitors to Australia) who leave Australia for 12 months or more, who **are** currently counted within the population, and are then subtracted from the population (NOM departures).

The current method for estimating net overseas migration is based on a traveller's **actual** duration of stay or absence using the 12/16 rule, i.e. the duration of stay or absence does not have to be continuous and is measured over a 16 month period. Preliminary estimates are modelled on patterns of traveller behaviours observed in final NOM estimates for the same period one year earlier (for more information refer to ABS Australian Demographic Statistics, cat. no. 3101.0 or ABS Migration, Australia, cat. no. 3412.0).

Estimates for September quarter 2006 onwards use an improved methodology; caution should be exercised when comparing estimates over time.

Population growth

The sum of natural increase and net overseas migration.

Population projections

ABS population projections are not predictions or forecasts, but are simply illustrations of the growth and change in population which would occur if certain assumptions about future levels of fertility, mortality, internal migration and overseas migration were to prevail over the projection period. Three main series of projections, Series A, B and C, have been selected from a possible 72 individual combinations of the various assumptions. Series B largely reflects recent trends in fertility, life expectancy at birth, net overseas migration and net interstate migration, whereas Series A and Series C are based on high and low assumptions for each of these variables respectively.

Series A

- a total fertility rate of 2.0 babies per woman from 2021 onwards,
- life expectancy at birth increasing to 93.9 years for males and 96.1 years for females by 2056 and remaining constant thereafter,
- net overseas migration of 220,000 people per year from 2011 onwards.

Series B

- a total fertility rate of 1.8 babies per woman from 2021 onwards,
- life expectancy at birth increasing to 85.0 years for males and 88.0 years for females by 2056 and remaining constant thereafter,
- net overseas migration of 180,000 per year from 2008 onwards.

Series C

- a total fertility rate of 1.6 babies per woman from 2021 onwards,
- life expectancy at birth increasing to 85.0 years for males and 88.0 years for females by 2056 and remaining constant thereafter,
- net overseas migration of 140,000 per year from 2011 onwards.

Total fertility rate (TFR)

The sum of age-specific fertility rates (live births at each age of mother per female population of that age). It represents the number of children a female would bear during her lifetime if she experienced current age-specific fertility rates at each age of her reproductive life.

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Society

A major driving force in human activity is the desire for optimal health, better living conditions and improved quality of life. Individuals seek to achieve these for themselves, for their family, and for the communities they are part of. A fundamental objective of government is to create better conditions of living for the population, and many community groups and private organisations also work towards this objective.

In this commentary, social progress involves increases in the wellbeing of the population; a reduction of threats to, and increases in, social cohesion; and protection and enhancement of democratic rights.

The headline dimensions that help Australians assess whether our society has improved include:

- Health
- Education and training
- Work
- Crime
- Family, community and social cohesion
- Democracy, governance and citizenship

While not given headline status, 'Culture and leisure', 'Communication', and 'Transport' have also been included as supplementary dimensions because of their relevance to whether life in Australia is getting better.

Health

People hope to have a long life, free from pain, illness or disability, and this also benefits society by reducing health care costs. Good health for all brings social and economic benefits to individuals, their families and the wider community.

Education and training

Education and training help people develop knowledge and skills that may be used to enhance their living standards, contribute to society and sustain and extend their cultural traditions. For an individual, educational attainment is widely seen as a key factor to a rewarding career and broader wellbeing. For the nation as a whole, having a skilled workforce is vital to supporting ongoing economic development and improvements in living conditions.

Work

Paid work is the means through which many people obtain economic resources for themselves and their dependants, needed for day to day living and to meet their longer-term financial needs. Having paid work also contributes to a person's sense of identity and self-esteem. People's involvement in paid work also supports economic growth and development.

Crime

Crime can have a major impact on the wellbeing of victims, their families and friends, and the wider community. Those most directly affected may suffer financially, physically, and emotionally, while the fear of crime can affect communities by restricting people's lives and reducing levels of trust and social cohesion. Other societal and economic costs include those associated with the provision of law enforcement and corrective services and with redressing damage to individuals, communities and public facilities.

Family, community and social cohesion

Families and communities are the building blocks of society and national life. The quality and strength of people's relationships and bonds with others - their family, friends and the wider community - are important ingredients of a cohesive and inclusive society. Families generate care and guidance which support the

development of healthy functioning individuals and the values underlying civil society. The vast range of services provided within communities by groups, clubs and charitable organisations are a crucial adjunct to support the role of the family.

Democracy, governance and citizenship

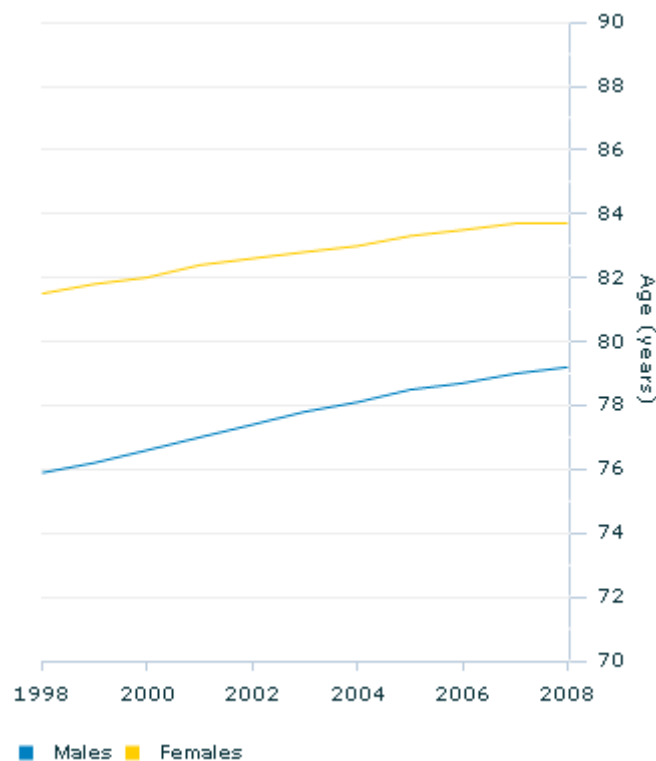
Good, effective public governance helps strengthen democracy and human rights, promote economic prosperity and social cohesion, reduce poverty, enhance environmental protection and the sustainable use of natural resources, and deepen confidence in government and public administration. Supporting effective governance are many factors such as the fairness of our society, the health of our democracy and the extent to which the citizens of Australia actively participate in democracy and civic life.

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Health



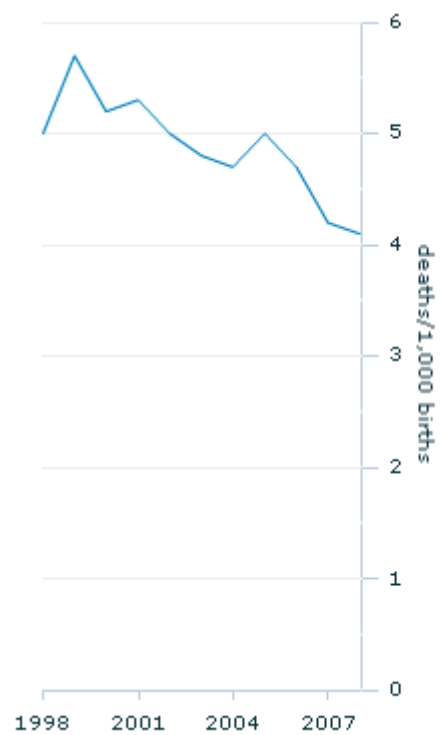
Life expectancy at birth

Life expectancy at birth for Australians improved during the decade 1998 to 2008. A boy born in 2008 could expect to live to 79.2 years (75.9 in 1998), while a girl born in 2008 could expect to reach 83.7 years (81.5 in 1998).

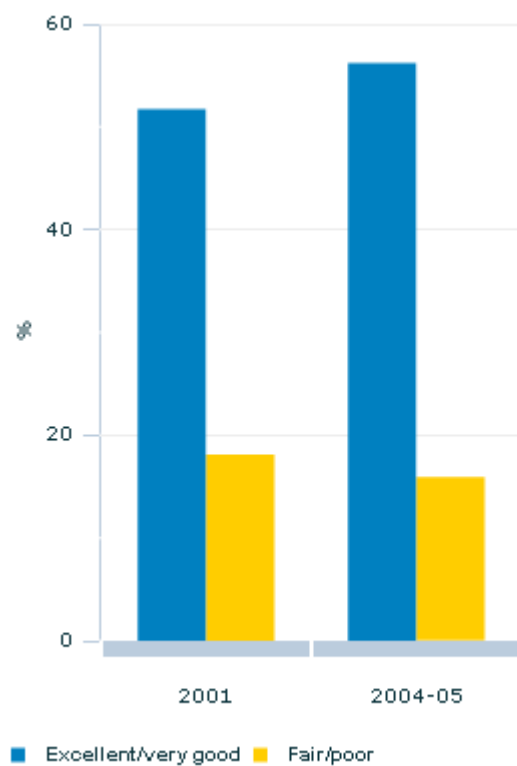
Over the last decade, life expectancy has increased slightly more quickly for boys (3.3 years) than for girls (2.2 years).



Infant mortality rate



Self-assessed health



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HEALTH AND PROGRESS

Good health directly, and indirectly, improves the wellbeing of individuals and the broader community. For an individual, good health means a life free of the burdens of illness (pain, social isolation, financial costs, and restrictions to lifestyle choices). For the nation, a healthy population is more able to contribute to society in various ways, such as through participation in employment and in education. A good level of health also brings about reduced direct costs to the community, both in terms of financial and human capital.

High levels of good health can be an indication that the social justice goals of a nation or community have been achieved to some degree. Conversely, evidence of poor health within the community in general, or among specific population groups, is of concern, and may be indicative of wider social problems within those communities.

An indicator describing how long Australians live that simultaneously takes into account the quality of life would be a desirable summary measure of progress. Currently, no such measure exists.

Life expectancy at birth is one of the most widely used and internationally recognised indicators of population health and is used as the headline indicator for the health dimension of progress. It focuses on the length of life rather than on its quality.

The infant mortality rate and people's assessment of their own health status are included as supplementary indicators of progress. Data on potentially avoidable deaths are also included to assess whether life in Australia is getting better.

In addition to the indicators, further information has been provided to show how the health of Australians has changed over time.

For a full list of definitions used in Health, please see the Health glossary.

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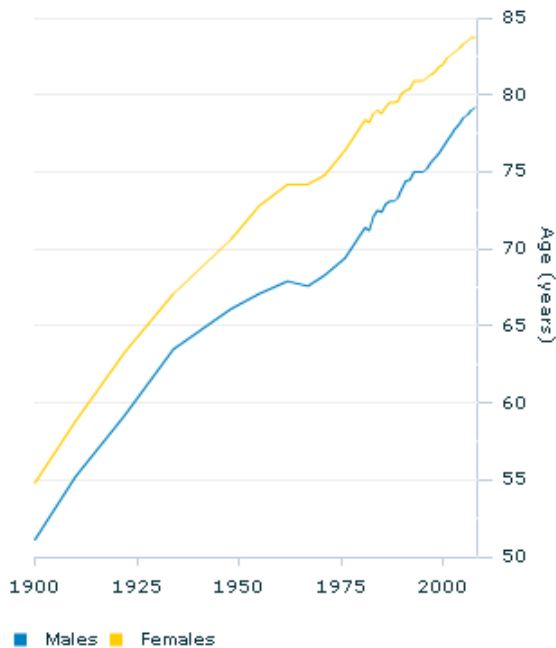
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Life expectancy at birth



Source(s): ABS Australian Historical Population Statistics, 2008 (cat. no. 3105.0.65.001); ABS Deaths, Australia, 2008 (cat. no. 3302.0)

LIFE EXPECTANCY AT BIRTH

Life expectancy at birth is one of the most widely used and internationally recognised indicators of population health. It focuses on the length of life rather than its quality, and provides a useful summary of the general health of the population.

In Australia, life expectancy at birth has improved for both males and females over the years. A boy born in 2008 could expect to live to 79.2 years of age, while a girl could expect to reach 83.7 years of age. Over the past decade, the gap between boys' and girls' life expectancy has reduced from 5.6 years in 1998 to 4.5 years in 2008.

Increases in life expectancy occurred over most of the 20th century, resulting in an increase of over 25 years of life for both men and women. In the first part of the century, improvements in living conditions such as the provision of cleaner water, better sewerage systems and improved housing, coupled with rising incomes and improved health care including initiatives such as mass immunisation, were associated with a decline in deaths from infectious diseases. These changes were particularly beneficial for infants, for pregnant women and those giving birth, and for older people. Rapid declines in infant deaths were the main reason that life expectancy increased in the first half of the 20th century (ABS 1995).

Increases in life expectancy slowed in the middle of the 20th century and then plateaued in the 1960s, largely because of increases in the rates of cardiovascular disease (Mathers & Douglas 1997). In the latter part of the century, chronic diseases, such as heart disease, cancer and strokes, have replaced infectious diseases as the main causes of death.

Further progress in life expectancy in the latter part of the 20th century was achieved with a decline in the number of deaths from chronic conditions, such as heart disease, cancer and strokes. This was largely due to the promotion of healthier lifestyles, continued improvements in living standards (including improved nutrition and better housing and working conditions), improvements in aged care management, and ongoing medical advances including improvement in illness prevention, screening, diagnosis and treatment.

Despite the continued improvement in the health of Australians, there are significant disparities between different population groups, such as between men and women and between Aboriginal and Torres Strait Islander peoples and non-Indigenous people. See [Progress of Australians](#) for further information.

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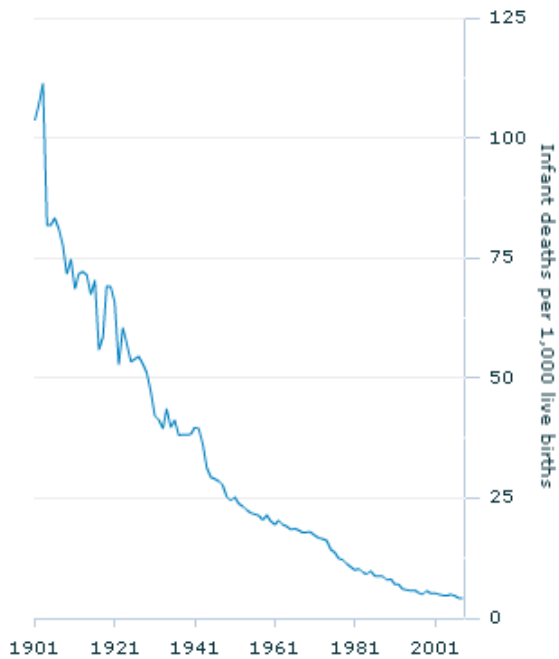
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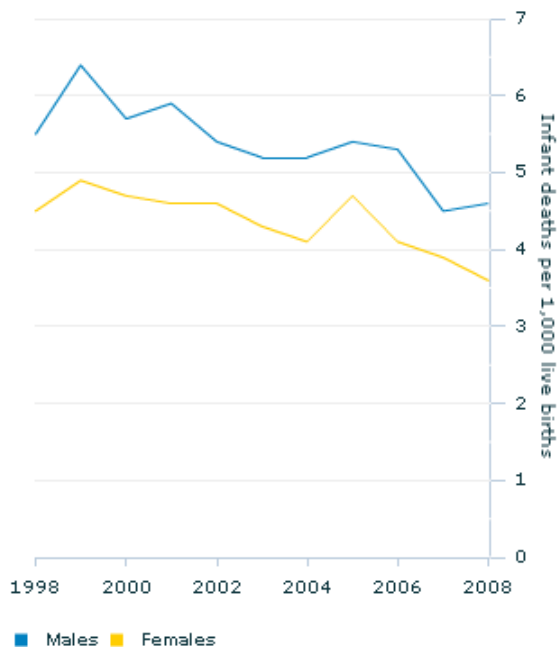
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Infant mortality rate



Source(s): ABS Australian Historical Population Statistics, 2008 (cat. no. 3105.0.65.001); ABS Deaths, Australia, 2008 (cat. no. 3302.0)

Infant mortality rate by sex



Source(s): ABS Deaths, Australia, 2008 (cat. no. 3302.0)

INFANT MORTALITY

Infant mortality (i.e. deaths under one year of age) is commonly viewed as an important indicator of the general health and wellbeing of a population, and has a large influence on life expectancy at birth. A high

infant mortality rate lowers life expectancy, while a low infant mortality rate contributes to increased life expectancy.

Over the past 10 years, the male infant mortality rate has been consistently higher than that for females. Between 1998 and 2008, the male infant mortality rate decreased from 5.5 to 4.6 deaths per 1,000 live births, while the female infant mortality rate declined from 4.5 to 3.6.

There was a considerable decline in infant mortality during the 20th century, particularly in the first half, largely due to improvements in prenatal and postnatal care, declines in infectious diseases, improved sanitation, drug development, mass vaccination and improvements in birth conditions (United Nations 1998). For every 1,000 babies born in Australia in 1904, nearly 82 died before their first birthday compared with around 29 deaths per 1,000 live births at the end of World War II. By 1998, the rate was 5 deaths per 1,000 live births. This had declined further by 2008 to just over 4 deaths per 1,000 live births. In 2008, 39% of all infant deaths occurred within the first day of birth, with a further 31% occurring before the baby reached four weeks of age (ABS 2009b).

In previous decades, the risk of death in the first year of life had a large impact on overall life expectancy. Male life expectancy at birth in 1901-1910 was around 55 years, but was 60 years for those reaching their first birthday (ABS 2008a). In more recent years there has been a much smaller difference between these life expectancies. For example, in 2008, life expectancy was around 79 years for males both at birth and for those reaching their first birthday (ABS 2009b).

High infant mortality rates are associated with poor socioeconomic conditions, and certain population groups may be more at risk than others (AIHW 2006). High infant mortality is one of the biggest health issues affecting Australia's Aboriginal and Torres Strait Islander population. For more information see Aboriginal and Torres Strait Islander peoples.

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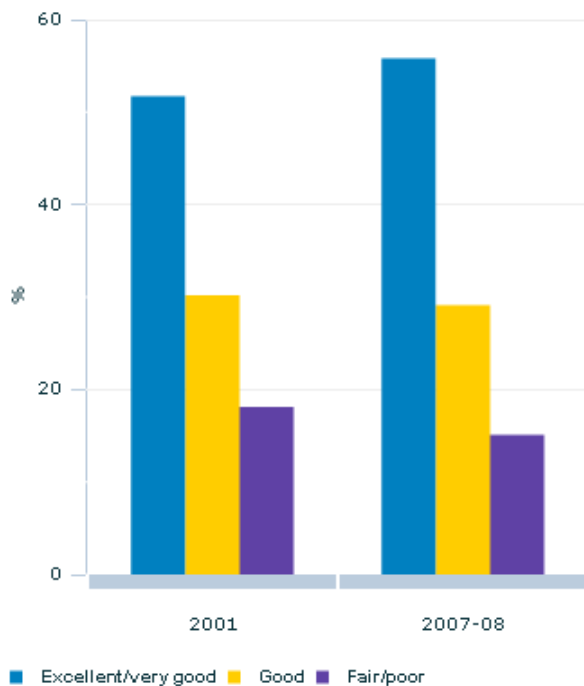
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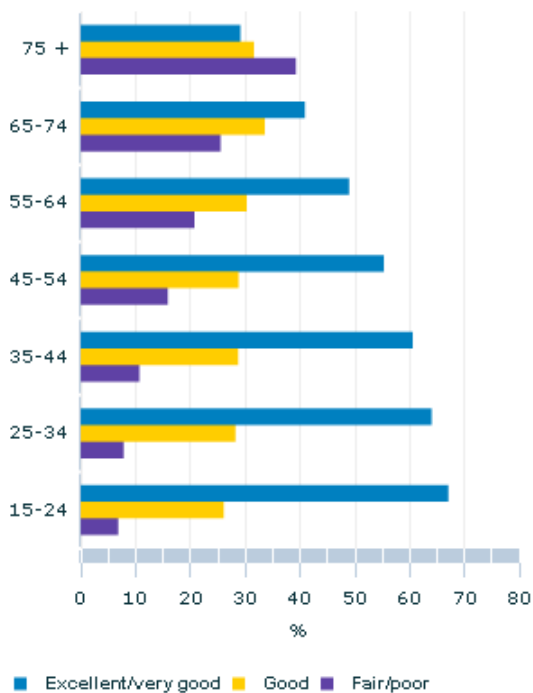
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Self-assessed health status



Source(s): ABS National Health Survey: Summary of Results, 2007-08 (cat. no. 4364.0)

Self-assessed health status by age - 2007-08



Source(s): ABS data available on request, 2007-08 National Health Survey

SELF-ASSESSED HEALTH STATUS

Self-assessed health status is commonly used as a proxy measure of actual health status and may

provide insights into how people perceive their own health in relation to lifestyle behaviours or disease.

Australians generally consider themselves to be healthy. In 2007-08, over half (56%) of Australians aged 15 years and over rated their health as very good or excellent, while 15% rated it as fair or poor. There has been little change in self-assessed health status since 2001.

Older people are more likely to report fair or poor health than younger people (39% of those aged 75 years and over and 7% of 15-24 year olds), while younger people are more likely to report excellent or very good health than older people (67% of 15-24 year olds and 29% of 75 years and over).

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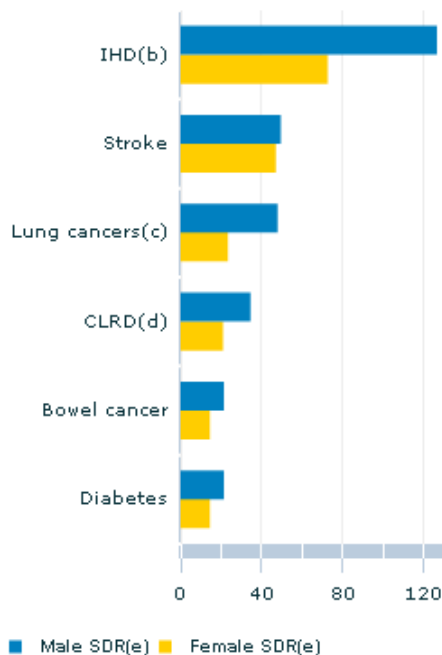
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Health

Top six leading avoidable causes of death(a) - 2008



Footnote(s): (a) See Health datacube for more information. (b) Ischaemic heart disease. (c) Trachea and lung cancers. (d) Chronic lower respiratory diseases. (e) Standardised death rate per 100,000 population. The standard population is the 2001 Australian estimated resident population.

POTENTIALLY AVOIDABLE DEATHS

Public health experts classify causes of deaths as avoidable and unavoidable. A potentially avoidable death is one that, theoretically, could have been avoided given an understanding of causation, the adoption of available disease prevention initiatives and the use of available health care.

An example of a potentially avoidable death is one due to Bowel cancer. This may be avoided by:

- primary prevention (diet and exercise),
- secondary prevention (early detection),
- tertiary prevention (effective surgery, chemotherapy and radiotherapy).

Conversely, an example of an unavoidable cause of death is Dementia, where no substantial gains are currently available through either primary, secondary or tertiary prevention with current medical management.

Potentially avoidable deaths decreased by almost 40% between 1987 and 2001 and this decline has contributed to a fall in the overall death rate (AIHW 2008). In 2007, there were 155.4 potentially avoidable deaths per 100,000 population.

In Australia, the top 10 leading causes of death accounted for 53% of all deaths registered in 2008 and six of these causes were potentially avoidable (Endnote 1).

The top two leading causes of death in 2008 were Ischaemic heart disease and Stroke, both of which are categorised as potentially avoidable.

- Ischaemic heart disease accounted for 16% of all deaths registered in 2008; down from 19% in 2003. Over the same period, the Ischaemic heart disease death rate declined from 122.8 deaths per 100,000 population in 2003 to 96.9 deaths per 100,000 population in 2008 (ABS 2010a).

- Men had a higher rate of death from Ischaemic heart disease than women in 2008 (126.7 and 72.7 deaths per 100,000 population respectively).
- Stroke remained the second leading cause of death in 2008, accounting for 8.3% of all deaths, a decrease from five years ago (9.3% of all deaths in 2003) (ABS 2010a).

The fourth to seventh leading causes of death in 2008 (Trachea and lung cancers, Chronic lower respiratory diseases (including asthma), Diabetes and Bowel cancer) were all causes of potentially avoidable deaths.

ENDNOTES

1. The selected causes of death presented here as 'avoidable' have been included on the basis that they are contained within the ICD-10 codes definition of 'Avoidable mortality' as presented in the Public Health Information Development Unit's (PHIDU) report, Australian and New Zealand Atlas of Avoidable Mortality (2006), and in reports by NSW Health and the Victorian Department of Human Services. These causes do not contain any of the age or sex restrictions applied to Potentially avoidable deaths. See Health glossary for more information.

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A PICTURE OF AUSTRALIA'S HEALTH

In developed countries such as Australia, improvements in nutrition, sanitation, water supplies, hygiene, and living and working conditions brought about major improvements in health and life expectancy, particularly before the 1950s. In the past 50 years, advances in medical technology have also been important. These advances have been supported by further improvements in lifestyle.

The following information has been included to provide more detail about how Australia's health has changed over time. The information relates to causes of death, cancers, the prevalence of heart disease, the burden of disease, living with a disability, risk factors and mental health.

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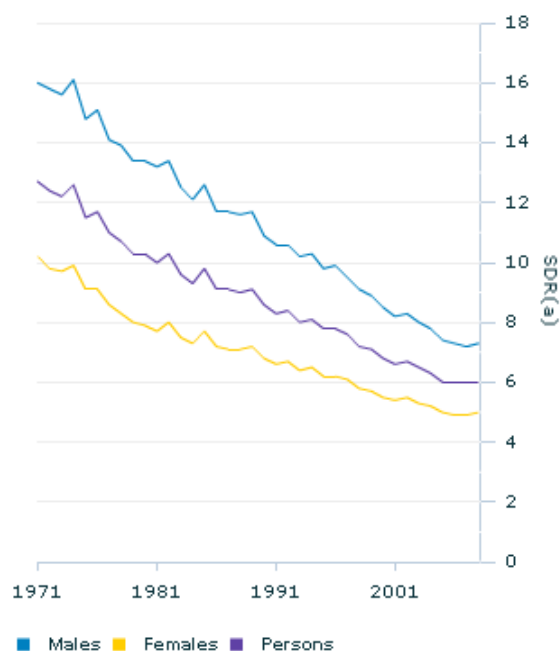
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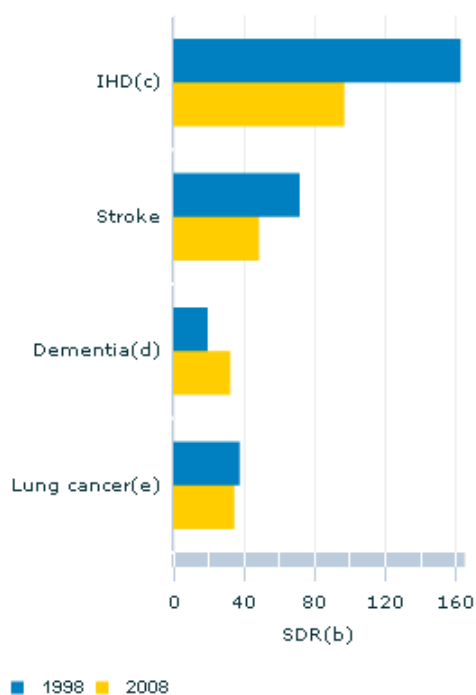
Standardised death rate(a)



Footnote(s): (a) Standardised death rate per 1,000 population. The standard population is the 2001 Australian estimated resident population.

Source(s): ABS Australian Historical Population Statistics, 2008 (cat. no. 3105.0.65.001); ABS Deaths, Australia, 2008 (cat. no. 3302.0)

Selected leading causes of death(a) - standardised death rates(b) - 1998 and 2008



Footnote(s): (a) Causes listed are the leading causes of death in 2008, based on total number of deaths. See Health datacube for more information. (b) Standardised death rate per 100,000 population. The

standard population is the 2001 Australian estimated resident population. (c) Ischaemic heart disease. (d) Dementia and Alzheimer's disease.

Source(s): ABS Causes of Death, Australia, 2008 (cat. no. 3303.0)

CAUSES OF DEATH

Information on causes of death provides insights into the diseases that contribute to changes in life expectancy. The leading causes of death have changed over the last century with significant decreases in the rate of infectious diseases, and increases in the rate of chronic conditions. In 2008, heart disease and cancers were Australia's leading causes of death.

In recent years (from 2005-2008) Australia's standardised death rate has remained at 6.0 deaths per 1,000 population. However, in the previous decades there was a general decline in Australia's standardised death rate, from 12.7 deaths per 1,000 in 1971 to 6.3 in 2004. Men have consistently higher death rates than women, although the gap has narrowed in recent years (ABS 2008a).

Advances in medical technology, public health measures (including the earlier detection of some illnesses) and healthier lifestyles have contributed to declines in the standardised death rates from some of the leading causes of death. For example, between 1998 and 2008 there have been decreases in the standardised death rates for Ischaemic heart disease as well as for Stroke, which were Australia's top two leading causes of death during that period. The standardised death rate for Ischaemic heart disease fell from 162.9 deaths per 100,000 population in 1998 to 96.9 deaths per 100,000 in 2008, while deaths from Stroke fell from 71.6 deaths per 100,000 population to 48.5 deaths per 100,000. Over the same period, the standardised death rate for Dementia and Alzheimer's disease increased by two thirds (67%) from 19.3 deaths per 100,000 in 1998 to 32.3 deaths per 100,000 in 2008 and was Australia's third leading cause of death in 2008.

Causes of death are also strongly linked to a person's age, with the risk of death increasing with age. Age-specific death rates for 2008 show that External causes of death (including Transport accidents and Suicide) were among the main causes of death for people under 45 years of age. For example, Suicide contributed to over one-fifth of deaths of both people aged 15-24 years (22%) and those aged 25-34 years (21%), but contributed only 6% of deaths of people aged 45-54 years. Death rates from External causes were much higher for men than for women. For those aged 45 years and over, Cancers and Diseases of the circulatory system became the main causes of death, with men typically having higher age specific death rates than women for these conditions (ABS 2010a).

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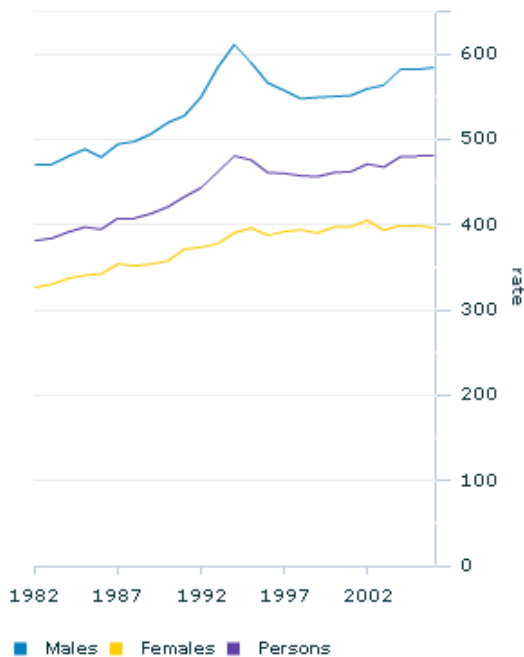
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Health

Incidence rate for all cancers(a) - 1982-2006



Footnote(s): (a) Rate per 100,000 people. Excludes non-melanoma skin cancers. Age standardised to the 2001 population.

Source(s): Australian Institute of Health and Welfare, Australian Cancer Incidence and Mortality (ACIM) books

CANCER

Cancers are among Australia's leading causes of death and are the major contributor to the burden of disease and injury in Australia (Begg et al. 2007). Cancer affects both the physical and emotional wellbeing of individuals and their families. It represents significant costs to the community and economy in terms of the provision of health care infrastructure, absence from work and premature mortality (ABS 2005).

Cancer is predominantly a disease of older people, and the longer people live, the more likely they are to die from cancer. So whilst the number of new cancer cases in Australia has increased, part of this growth is due to the ageing of Australia's population.

Incidence

The incidence rate (the number of new cases identified per year) for all cancers increased from 462 cases per 100,000 people in 1996 to 480 cases per 100,000 people in 2006 (excluding non-melanoma skin cancers, which are by far the most common). The incidence rate was higher for men than for women. By the age of 85, 1 in 2 Australian men and 1 in 3 women will have been diagnosed with cancer at some stage of their life (AIHW 2010b).

Deaths and survival

The standardised death rate for men from Cancer decreased from 262 to 232 deaths per 100,000 men between 1998 and 2008. For women the decrease was from 156 deaths to 144 deaths per 100,000 women between 1998 and 2008 (ABS 2010a; ABS 2010g).

Changes in death rates from Cancer depend on changes of incidence, the stage at diagnosis, prevention,

better diagnostic tools, and, in part, on improvements in treatment techniques. For example, early detection through the BreastScreen Australia screening program and improvements in treatment have contributed to the five-year relative survival for breast cancer in females improving from 72% for those diagnosed in 1982-1986 to 88% for those diagnosed in 1998-2004 (AIHW 2010b).

Cancer survival rates from 1982-1986 to 1998-2004 show that the proportion of cancer patients surviving five years or longer increased from 41% to 58% for men, and 53% to 64% for women (AIHW 2010b). However, gains in survival have not been consistent across all forms of cancer. The survival rate for brain cancer remained at between 18% and 21% over the 20 years to 2004 for both men and women (AIHW 2010b).

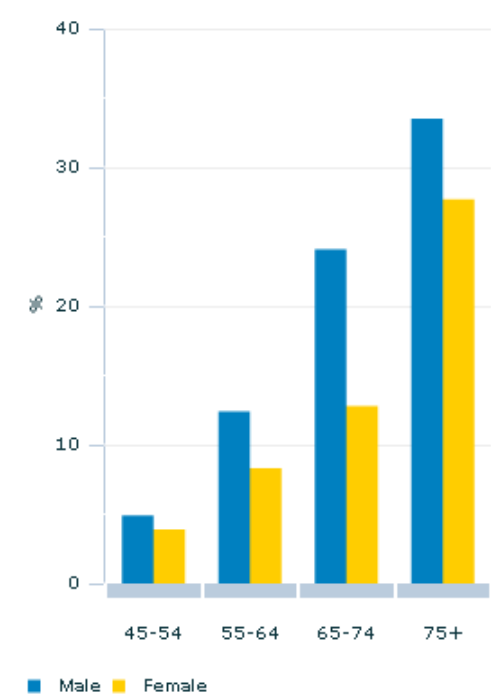
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Prevalence of heart stroke and vascular disease(a) by age - 2007-08



Footnote(s): (a) Data for 15-24 and 25-34 year age groups available in the Health datacube.

Source(s): ABS data available on request, 2007-08 National Health Survey

HEART, STROKE AND VASCULAR DISEASE

Deaths due to heart, stroke and vascular disease have declined over the last three decades, largely due to better prevention, treatment and a greater awareness of risks. In 2007-08, 6.4% of all Australians (aged 15 years or over) had some form of heart, stroke or vascular disease, down from 7.2% in 2001. Despite this decline in the prevalence of heart, stroke and vascular disease, it is still one of Australia's biggest killers (because of the deaths it causes in older people), and one of the largest contributors to the burden of disease.

Of all people with heart, stroke or vascular disease, 62% had ischaemic heart disease and 22% had cerebrovascular disease (stroke).

Overall, men are more likely than women to suffer from heart, stroke or vascular disease. In 2007-08, 7.1% of all men and 5.8% of all women had heart, stroke or vascular disease. The difference in prevalence for men and women was greatest for those aged 65-74 years, where almost twice the proportion of men (24%) had heart, stroke or vascular disease than did women (13%).

Heart, stroke and vascular disease is strongly correlated with age. In 2007-08, 30% of people aged 75 years and over had heart, stroke or vascular disease compared with 1.6% of people aged 35-44 years.

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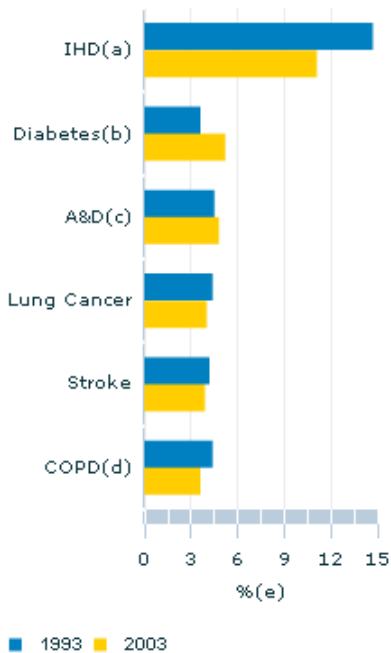
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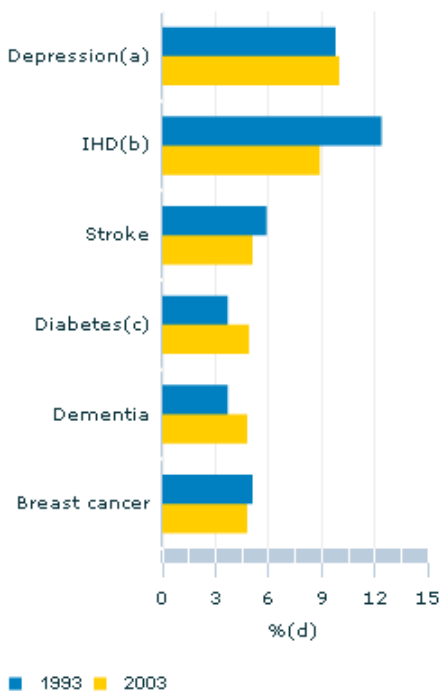
Selected leading causes of the burden of disease for men



Footnote(s): (a) Ischaemic heart disease. (b) Type 2 Diabetes. (c) Anxiety and Depression. (d) Chronic obstructive pulmonary disease (e) Proportion of total burden of disease.

Source(s): Begg S, Vos T, Barker B, Stevenson C, Stanley L, Lopez AD, Burden of Disease and Injury in Australia, 2003 (cat. no. PHE 82), Canberra, AIHW

Selected leading causes of the burden of disease for women



Footnote(s): (a) Anxiety and Depression. (b) Ischaemic heart disease. (c) Type 2 Diabetes. (d) Proportion of total burden of disease.

Source(s): Begg S, Vos T, Barker B, Stevenson C, Stanley L, Lopez AD, Burden of Disease and Injury in Australia, 2003 (cat. no. PHE 82), Canberra, AIHW

BURDEN OF DISEASE

The burden of disease provides an insight into the loss of health and wellbeing of Australians due to premature mortality, disability and other non-fatal events. Summary measures that combine information on mortality, disability and other non-fatal health outcomes give a more complete view of the health of the population than life expectancy alone. In this analysis we use a measure that is known as the Disability Adjusted Life Year (DALY). This measure combines information about the years of healthy life lost due to either premature mortality, or to years lived with a disability.

The latest available data shows that in 2003, cancer overtook cardiovascular disease as the largest contributor to the overall burden of disease (19% compared with 18%). This is largely attributable to the success in reducing the impact of cardiovascular disease.

Cancer has remained a relatively stable contributor to the total burden of disease (Begg et al. 2007). From 1993 to 2003, the total burden experienced as a result of ischaemic heart disease decreased from 15% to 11% for men and from 12% to 9% for women.

Anxiety and depression contributed 10% of the total burden of disease for women in 2003, twice that of men (4.8%).

As the population ages it is expected that the total burden of disease experienced as a result of neurological and sense disorders (such as dementia) will increase, as will the total burden of Type 2 diabetes which is primarily linked to obesity (Begg et al. 2007). From 1993 to 2003, the total burden of dementia rose slightly from 2% to 3% for men and 4% to 5% for women. Over the same period, the total burden of Type 2 diabetes increased slightly from 4% to 5% for both men and women.

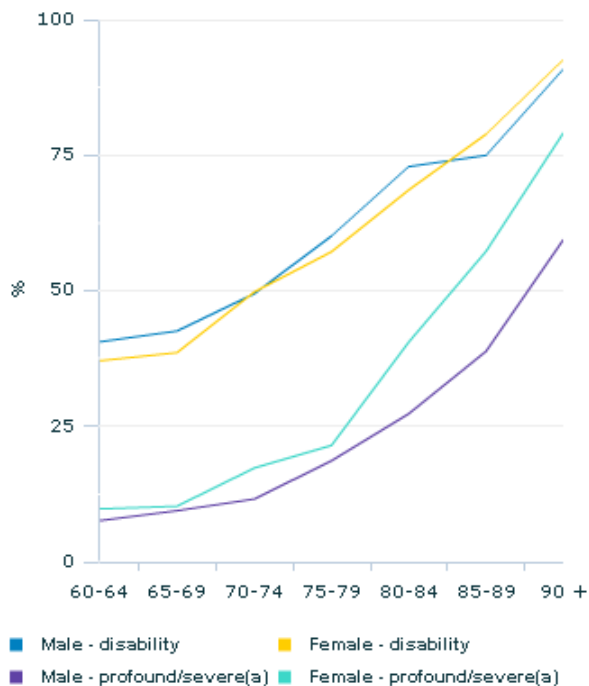
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Disability rates by age and limitation - 2003



Footnote(s): (a) Profound or severe core-activity limitation.

Source(s): ABS Survey of Disability, Ageing and Carers, 2003 (cat. no. 4430.0)

LIVING WITH A DISABILITY

Disability can occur at any stage of a person's life and, depending on when it occurs, may affect an individual's participation in a range of everyday activities. Disability is strongly age-related and, as a result, the support requirements of older people with disabilities are one current key policy interest, as evidenced by the National Disability Strategy. With increasing numbers of people living to older ages, and with the prospect of the large baby boomer cohorts reaching older ages, the question of how to meet the needs of older people with disabilities is becoming increasingly acute. However, disability also occurs in younger people, and for them the issues are somewhat different, such as the impact of having a disability on prospective employment opportunities and career choices.

In 2003, an estimated one in five (20%) Australians were living with a disability (almost 4 million people), while the rate of profound or severe core-activity limitation was 6.3%. Both of these rates of disability remained stable over the period 1998 to 2003 (ABS 2004).

The rate of disability among people aged 60 years and over is much higher than for younger people. Furthermore, as people grow older the severity of their disability is likely to increase, particularly for those aged 75 years and over. Consequently, people in this age group are more likely to need assistance with activities in their personal life, such as health care, communication, meal preparation and mobility.

In 2003, women aged 80 years and over had a much higher rate of profound or severe core-limitation than men in the same age group (52% compared with 34%). Over nine-tenths (92%) of all Australians aged 90 years and over were living with a disability and 74% of people in this age group were living with a profound or severe core-activity limitation.

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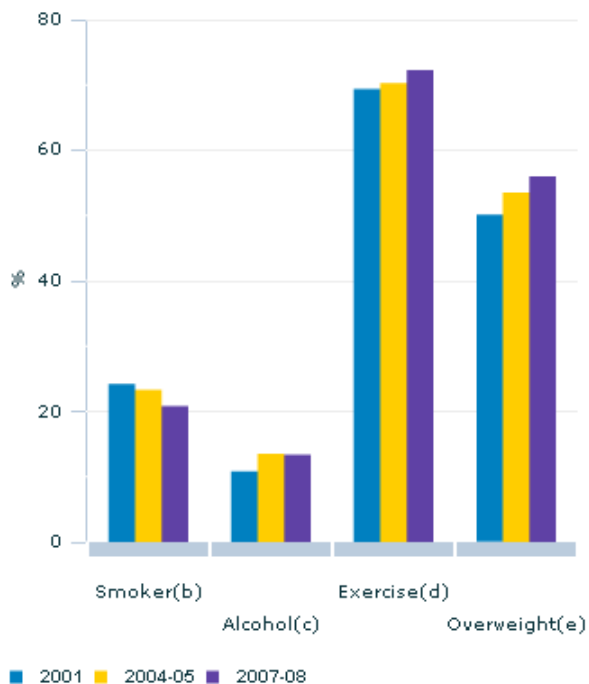
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Health

Adults with health risk factors(a)



Footnote(s): (a) People aged 18 years and over. (b) Current smoker. (c) Risky/high risk alcohol consumption. Risk to health in the long-term. (d) Sedentary/low exercise level. (e) Overweight/Obese Body Mass Index (BMI) - self-reported adults.

Source(s): ABS data available on request, 2001, 2004-05 and 2007-08 National Health Survey

LIFESTYLE BEHAVIOURS

People's lifestyles can have a major impact on their health. Risky behaviours can signify an increased risk of developing a particular disease or condition (e.g. cancer, cardiovascular disease, diabetes or kidney disease). Smoking, risky drinking and obesity may affect a person's health condition, resulting in days away from work or study and in a reduced ability to participate in family and community activities. Smoking may also affect the health of others, particularly family members, through exposure to second-hand smoke.

The effects of these risky lifestyle behaviours may have wider implications for both society and the economy, in terms of the cost to Australia's health care system.

In 2007-08, more adults were overweight or obese than in 2004-05 or 2001. In contrast, smoking rates have declined since 2001.

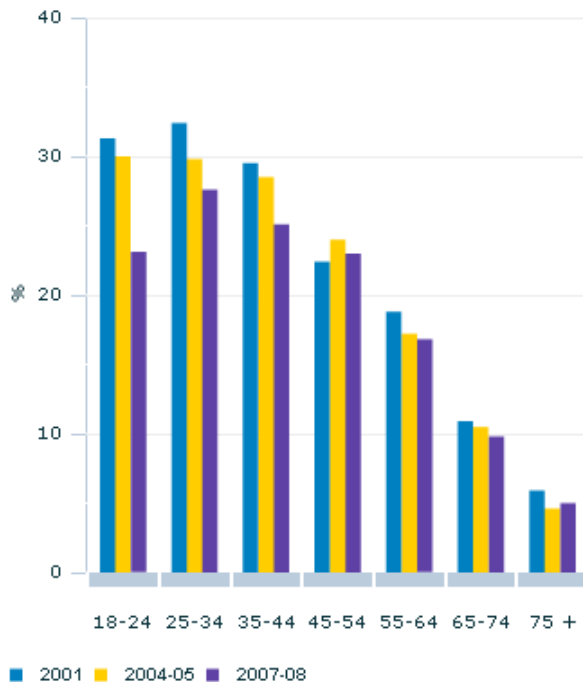
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Health

Current smokers



Source(s): ABS National Health Survey: Summary of Results, 2007-08 (cat. no. 4364.0)

SMOKING

Smoking is recognised as the 'largest single preventable cause of death and disease in Australia' (AMA 2005). It is associated with an increased risk of heart disease, stroke, cancer, emphysema, bronchitis, asthma, renal disease and eye disease. About one-fifth (21%) of people (aged 18 years and over) were current smokers in 2007-08, down from 23% in 2004-05 and 24% in 2001. These declines have taken place in the context of a high level of investment in anti-smoking campaigns and increased restrictions on smoking in public places such as workplaces, restaurants and pubs.

In 2007-08, more men smoked than women (23% of men and 19% of women). People aged 25-34 years had the highest rate of current smokers (33% of men and 22% of women).

Passive smoking

Passive smoking increases the risk of heart disease, asthma, and some cancers. It may also increase the risk of Sudden Infant Death Syndrome (SIDS), and may predispose children to allergic sensitisation (National Public Health Partnership 2000). In the late 1990s there was a national response to reduce passive smoking in enclosed public places and in workplaces and this has continued into the 2000s.

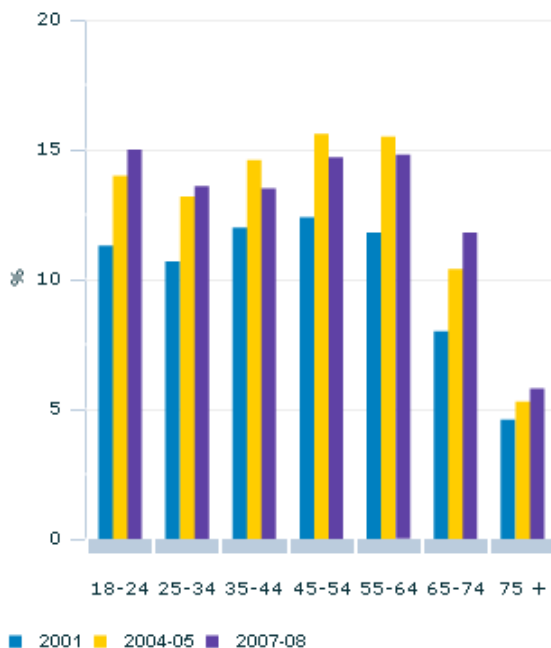
During 2007-08, 3.5% of people (aged 15 years and over) and 7.2% of children (aged under 15 years) lived in a household where a daily smoker was reported to have smoked indoors (ABS 2009e). These people are at risk of exposure to second-hand smoke and may be involuntarily subjected to passive smoking and its associated risks.

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Risky or high risk alcohol consumption(a)



Footnote(s): (a) Risk to health in the long term. See Alcohol consumption risk level in the Health glossary.

Source(s): ABS data available on request, 2007-08 National Health Survey

ALCOHOL CONSUMPTION

The long-term effects of excessive alcohol consumption may increase people's risk of developing chronic illness, or may result in premature death. Excessive alcohol consumption can also have acute short-term effects, for example through an increased association with dangerous driving and violence that can lead to injury or death. Alcohol consumption, when mixed with prescription drugs, can also have further dangerous short-term side effects.

The proportion of Australians who reported that they consume alcohol has declined slightly in recent years. In 2007-08, 59% of adults had consumed alcohol in the week prior to interview compared with 62% in 2004-05 and 2001 (ABS 2009d).

Alcohol consumption can be classified to a risk level to health in the long-term (low risk, risky or high risk). Since 2001, the proportion of men and women drinking at levels considered risky or high risk to health in the long-term has increased slightly. In 2007-08, 13% of people aged 18 years and over consumed alcohol at a risky or high risk level in the week prior to interview, compared with 11% in 2001.

Overall in 2007-08, men were more likely to drink at a risky or high risk level than women (14% compared with 11%).

Short-term risk and young people

The short-term risks of excessive alcohol consumption affect individuals and society in a number of ways and may result in injury or premature death due to accidents and violence (ABS 2008b). In the 10 years from 1995-96 to 2004-05 an estimated 813,000 Australians (aged 15 years and over) were hospitalised for alcohol-attributable injury or disease (Pascal, Chikritzhs & Jones 2009).

In 2007-08, 13% of men (aged 15 years or over) drank alcohol at levels considered risky or high risk to health in the short-term at least once a week. This was much higher than for women (6%) and was highest for young men aged 15-24 years (15%) and men aged 25-44 years (16%) (ABS 2010c).

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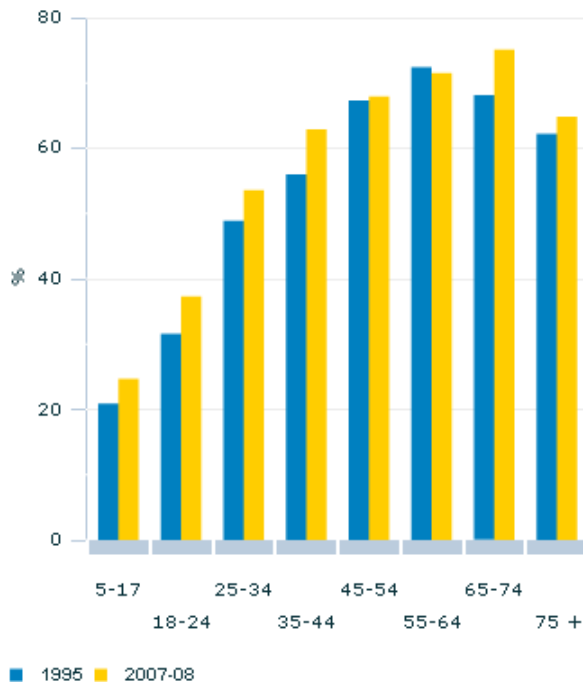
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Health

Overweight or obese people(a)



Footnote(s): (a) Based on measured BMI (see Health glossary). Excludes those for whom body measurements were not taken.

Source(s): ABS data available on request, 1995 and 2007-08 National Health Survey

OBESITY

Obesity may have significant health, social and economic impacts and is closely related to lack of exercise and to diet. Being overweight or obese increases the risk of suffering from a range of conditions, including coronary heart disease, Type 2 diabetes, some cancers, knee and hip problems and sleep apnoea. In 2008, the total annual cost of obesity in Australia, including health system costs, productivity declines and carers' costs, was estimated at around \$58 billion (Access Economics 2008).

The proportion of adults (aged 18 years or over) classified as obese or overweight has increased from 56% in 1995 to 61% in 2007-08. For men, the increase was from 64% to 68% in 2007-08, while for women, the proportion rose from 49% to 55%.

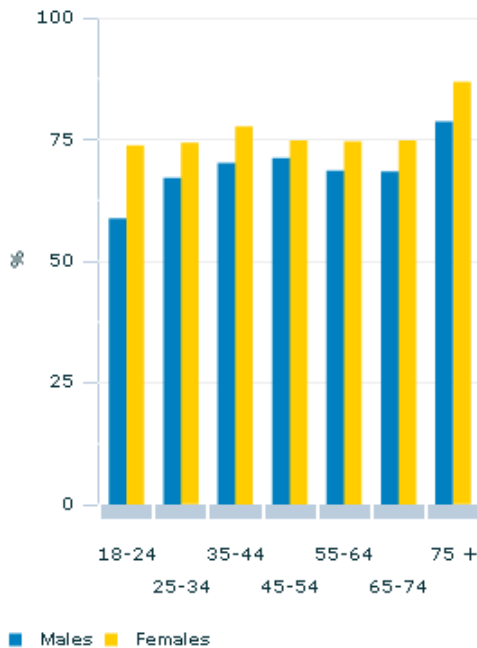
In 2007-08, one quarter of Australian children (or around 600,000 children aged 5-17 years) were overweight or obese, up four percentage points from 1995. In relation to obesity only, the rate for children (aged 5-17 years) increased from 5.2% in 1995 to 7.5% in 2007-08. Studies have shown that once children become obese they are more likely to stay obese into adulthood and have an increased risk of developing diseases associated with obesity (AIHW 2004).

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People with a low level of exercise or sedentary(a) - 2007-08



Footnote(s): (a) Refers to exercise undertaken in the two weeks prior to interview. See Health glossary for definitions of exercise levels.

Source(s): ABS data available on request, 2007-08 National Health Survey

EXERCISE

Exercise can benefit both physical and mental health. It has been shown to reduce the risk of diseases or conditions such as cardiovascular disease, Type 2 diabetes, osteoporosis and obesity. In addition, exercise through sport and recreation can provide social benefits through increased social interaction and integration (ABS 2009f).

In 2007-08, close to two-thirds (65%) of adults reported exercising for recreation, sport or fitness in the previous two weeks.

Over two-thirds (68%) of men and around three-quarters (76%) of women were assessed as having a low level of exercise or being sedentary. The proportion of people with a sedentary lifestyle has not changed substantially over the past decade or so.

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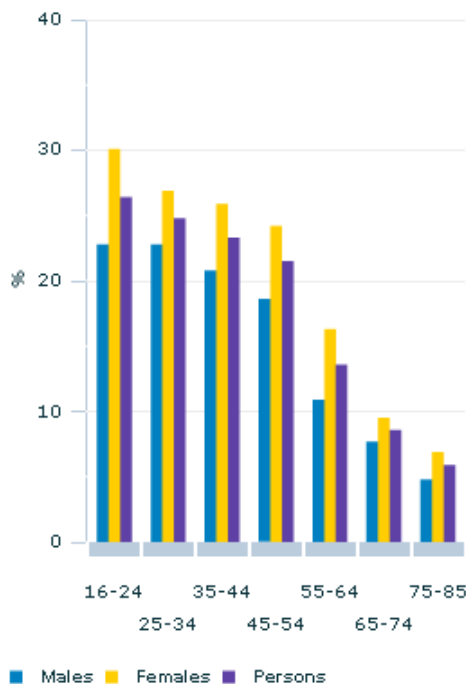
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Health

Proportion of people with a mental disorder(a) - 2007



Footnote(s): (a) People aged 16-85 years who met criteria for diagnosis of a lifetime mental disorder and had symptoms in the 12 months prior to interview.

Source(s): ABS National Survey of Mental Health and Wellbeing: Summary of Results, 2007 (cat. no. 4326.0)

MENTAL HEALTH

An individual's mental health affects their ability to relate to family, friends, work mates and the broader community. People with a mental disorder may experience significant distress and/or disability.

In 2007, almost half (45% or 7.3 million) of 16 million Australians (aged 16-85 years) met the criteria for a diagnosis of a mental disorder at some point in their life. One-in-five (3.2 million) had experienced the symptoms in the 12 months prior to the survey.

Age and sex

Women had higher rates of mental disorders (within the 12 months prior to the survey) than did men (22% compared with 18%), while younger people had higher rates than older people. Around a quarter of people aged 16-24 years (26%) and people aged 25-34 years (25%) had experienced the symptoms of a mental disorder in the 12 months prior to the survey compared with 5.9% of those aged 75-85 years old.

Adolescence and young adulthood is a critical stage of transition in an individual's physical and mental development. Mental disorders in young people can seriously disrupt their growth and development, eroding their quality of life by affecting their self-confidence, relationships, education and employment (ABS 2010d). Over three-quarters (76%) of people who experience mental disorder during their lifetime

will first develop a disorder before the age of 25 years.

Type

In 2007, anxiety disorders were the most common mental disorders, affecting 14% of all people (aged 16-85 years) in the 12 months prior to the survey. Anxiety disorders generally involve feelings of tension, distress or nervousness. Specific anxiety disorders such as panic disorder, agoraphobia and generalised anxiety disorder have some symptoms in common such as a pounding heart, sweating, trembling, shaking and having difficulty breathing. Women were more likely to have experienced anxiety disorders than men (18% and 11% respectively) (ABS 2009c).

Severity

The symptoms of mental illness may interfere with people's lives in different ways and to different degrees. The severity of mental disorders can be classified as mild, moderate or severe, based on a person's reporting of the impact of their symptoms on their home life, their social life, their ability to work and their relationships.

In 2007, of all people with a mental disorder, just over one-fifth (21%) had a severe disorder, one-third (33%) had a moderate disorder and just under half (46%) had a mild disorder (ABS 2009c).

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PROGRESS OF AUSTRALIANS

While the health of Australians as a whole has generally been improving over the last decade, this improvement has not been uniform across the population. Some population groups have specific health needs over and above the health needs of the general population. These groups may be affected by a number of other social issues such as poverty, family dysfunction, discrimination or geographical isolation.

This section looks at the different health outcomes for men and women, Aboriginal and Torres Strait Islander peoples, and older Australians. It also looks at health outcomes by socioeconomic status.

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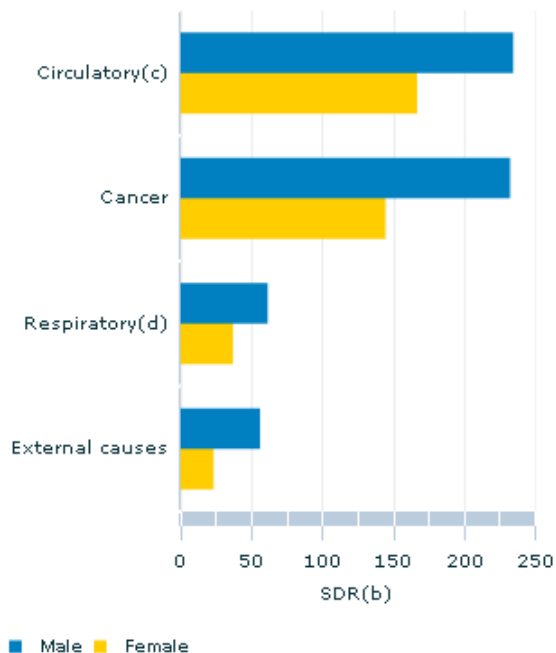
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Selected causes of death by sex - 2008(a)



Footnote(s): (a) Causes listed are the leading causes of death in 2008, based on total number of deaths. See Health datacube for more information. (b) Standardised death rate per 100,000 population. The standard population is the 2001 Australian estimated resident population. (c) Diseases of the circulatory system. (d) Diseases of the respiratory system.

Source(s): ABS Causes of Death, Australia 2008 (cat. no. 3303.0)

MEN AND WOMEN

There are numerous biological and gender factors that result in different health outcomes for men and women. For example, while men are more likely to engage in risky behaviours such as substance abuse and dangerous driving, women are more likely than men to visit a health professional, and tend to have a lower prevalence of many long-term conditions.

A girl born in 2008 could expect to live 4.5 years longer than a boy born in 2008 (to 83.7 years and 79.2 years respectively). However, in recent years, life expectancy at birth for males has increased more quickly than for females. From 1998 to 2008, life expectancy increased by 3.3 years for men and 2.2 years for women.

In 2008, the standardised death rate (SDR) for men was higher than for women (7.3 deaths per 1,000 men, compared with 5.0 deaths per 1,000 women) (ABS 2009b). This difference is attributed to different attitudes, biology, behaviours, lifestyles and the different working patterns of men and women. Women, for example, are less likely to be overweight or to smoke, which reduces the risk of some cancers, cardiovascular disease and diabetes. Men, however, are more often involved in hazardous occupations and are more prone to risky behaviours, particularly in early years of adult life, which together result in higher death rates due to accidents (ABS 2010c).

Self-assessed health status was very similar for men and women. In 2007-08, 55% of men reported their health as excellent or very good compared with 57% of women (ABS 2010g).

In regards to disability, a profound or severe core-activity limitation was more common for young men (aged 5-14 years) than young women (aged 5-14 years) (6.5% and 3.3% respectively) in 2003. In contrast, women aged 80 years and over were much more likely than men of the same age to have a profound or severe core-activity limitation (52% compared with 34%) (ABS 2004).

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ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLES

The health status of Australia's Aboriginal and Torres Strait Islander people is poor in comparison to the rest of the Australian population. On average, Indigenous Australians experience a higher burden of disease than non-Indigenous Australians (through kidney disease, diabetes, eye and hearing issues, as well as accidents and external injury). Indigenous Australians also experience higher rates of mortality than non-Indigenous Australians.

A number of factors help to explain why Aboriginal and Torres Strait Islander people have poorer health than other Australians. In general, Aboriginal and Torres Strait Islander people are more likely to experience disadvantage in terms of education, health education, unemployment, inadequate housing and infrastructure than other Australians. In particular, crowded housing has been identified as contributing to the spread of infectious diseases. Aboriginal and Torres Strait Islander Australians are also more likely to smoke, have poor diets and have high levels of obesity.

The health outcomes of the Aboriginal and Torres Strait Islander population are not consistent across Australia. Those who live in urban areas may have different outcomes than those who live in regional or remote localities. Access to appropriate health services is an issue for Aboriginal and Torres Strait Islander people, especially those in regional or remote localities.

Life expectancy and mortality

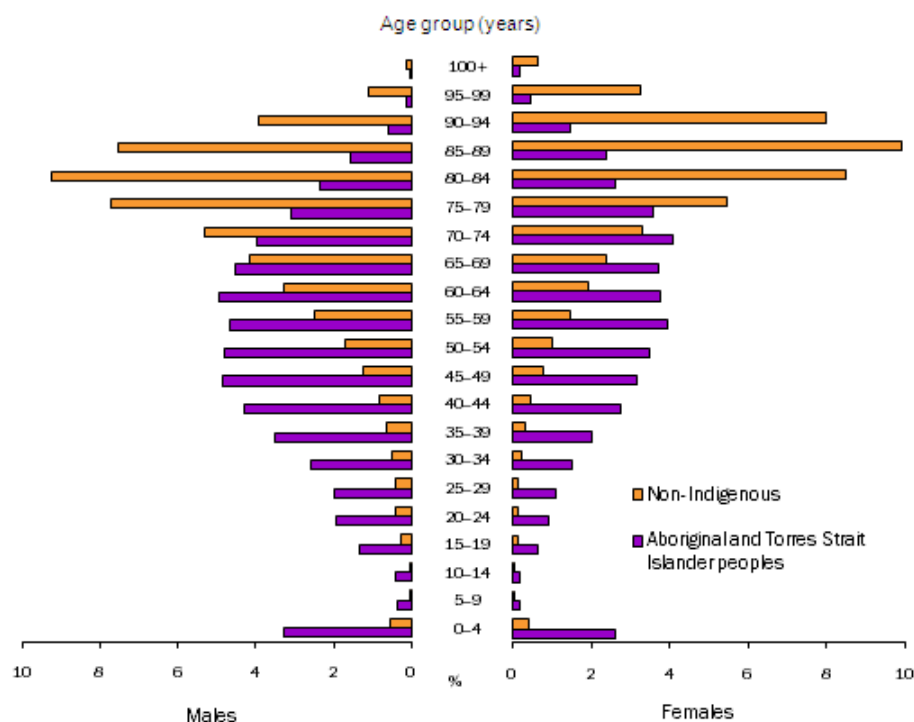
Life expectancy for Aboriginal and Torres Strait Islander men is estimated to be 11.5 years less than for non-Indigenous men (67.2 years and 78.7 years respectively). For Aboriginal and Torres Strait Islander women, the difference is 9.7 years (72.9 years for Aboriginal and Torres Strait Islander women and 82.6 years for non-Indigenous women) (ABS 2010e).

In 2008, Aboriginal and Torres Strait Islander deaths accounted for 1.7% of all deaths in Australia. This proportion was much larger in the Northern Territory (44.9%), reflecting the relatively high proportion (30% in 2006) of Aboriginal and Torres Strait Islander people in the Northern Territory.

In general, deaths of non-Indigenous people are concentrated in the older age groups, while deaths of Aboriginal and Torres Strait Islander people are more widely spread across all age groups. For example, for 2006-2008, age-specific death rates of Aboriginal and Torres Strait Islander people in South Australia, Western Australia and the Northern Territory combined were at least 7 times higher than non-Indigenous rates for both men and women aged 35-44, and at least 6 times higher for both men and women aged 45-54 (ABS 2009b).

In particular, death rates for 35-54 year old Aboriginal and Torres Strait Islander people were higher for Ischaemic heart disease, Diseases of the liver (i.e. Alcoholic liver disease and Cirrhosis of the liver), Diabetes and other forms of heart disease than non-Indigenous people in the same age group (ABS 20010g). For example, in 2006-2008, Indigenous age-specific death rates for ages 35-54 years for Ischaemic heart disease were 76.0 deaths per 100,000 Indigenous population in New South Wales and Queensland combined, and 149.6 deaths per 100,000 Indigenous population in South Australia, Western Australia and the Northern Territory combined. These rates compared with non-Indigenous age-specific death rates of 16.4 and 17.5 per 100,000 non-Indigenous population.

Proportion of deaths(a)(b), Aboriginal and Torres Strait Islander status(c), Age group(d) and sex - 2006-2008



(a) Deaths calculated as the proportion of all deaths registered for respective Aboriginal and Torres Strait Islander status.
 (b) For exclusions, see Health datacube.

Source: ABS Data available on request, 2006-2008 Deaths collection

Infant mortality

The Aboriginal and Torres Strait Islander infant mortality rate varies across Australia. In New South Wales, the rate was 7.7 deaths per 1,000 live births in 2006-2008, compared with the non-Indigenous infant mortality rate of 4.3 deaths per 1,000 live births. In the Northern Territory, the Aboriginal and Torres Strait Islander infant mortality rate was over three times as high as the non-Indigenous infant mortality rate (13.6 deaths per 1,000 live births compared with 3.8 deaths per 1,000 live births).

Male Aboriginal and Torres Strait Islander infant mortality in the Northern Territory was about 15 deaths per 1,000 live births, while female Aboriginal and Torres Strait Islander infant mortality was 12 deaths per 1,000. For non-Indigenous males the rate was 4.4 deaths per 1,000 births and for females it was 3.3 deaths per 1,000 (ABS 2009b).

Between 1998 and 2008 the Indigenous to non-Indigenous rate ratio (the Aboriginal and Torres Strait Islander rate divided by the rate for other Australians) for infant mortality declined in the Northern Territory an average of 1.7% per year, while the rate difference (the Aboriginal and Torres Strait Islander rate minus the rate for other Australians) almost halved from 18.1 to 9.8 deaths per 1,000 births which suggests that the gap between Aboriginal and Torres Strait Islander and non-Indigenous infant mortality in the Northern Territory has reduced (ABS 2009b).

External causes of death

Aboriginal and Torres Strait Islander Australians experience relatively high rates of injury and death from accidents and violence (ABS 2008c). In 2008, 16% of all Aboriginal and Torres Strait Islander deaths were attributed to External causes, compared with 5.9% of non-Indigenous deaths. Almost two-thirds (66%) of Aboriginal and Torres Strait Islander deaths due to External causes occurred amongst men. Intentional self harm (suicide) (4.2% of all Aboriginal and Torres Strait Islander deaths) and Land transport accidents (4.0%) were the leading External causes of death for Aboriginal and Torres Strait Islander people (ABS 2010a).

Risk factors

As with the Australian population as a whole, the proportion of Aboriginal and Torres Strait Islander people who are daily current smokers has declined. In 2008, 45% of Aboriginal and Torres Strait Islander

Australians (aged 15 years and over) were current daily smokers, compared with 49% in 2002. This is the first statistically significant decrease in Aboriginal and Torres Strait Islander smoking rates reported since 1994 although Aboriginal and Torres Strait Islander people are still twice as likely to be current daily smokers as non-Indigenous people. The proportion of Aboriginal and Torres Strait Islander people aged 15 years and over who reported drinking alcohol at levels considered risky or high risk to health in the long-term was similar in 2008 (17%) to what it was in 2002 (15%) (ABS 2010e).

Self-assessed health and psychological distress

In 2008, Aboriginal and Torres Strait Islander Australians reported poorer self-assessed health than non-Indigenous Australians, and were more likely to report higher levels of psychological distress. After adjusting for age differences, Aboriginal and Torres Strait Islander people (aged 15 years and over) were twice as likely as non-Indigenous people to report fair/poor health. This gap has remained unchanged since 2002 (ABS 2010e).

The rate of high or very high levels of psychological distress for Aboriginal and Torres Strait Islander Australians (aged 18 years and over) was also more than twice that of non-Indigenous Australians (ABS 2010e).

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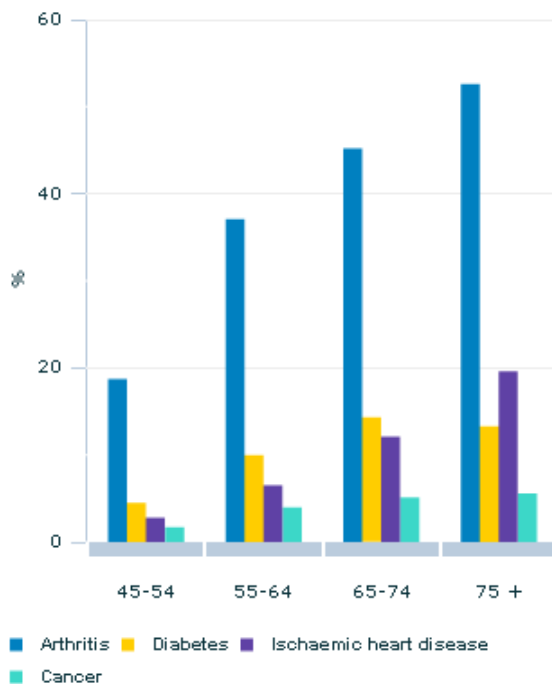
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Health

Long-term health conditions - 2007-08



Source(s): ABS data available on request, 2007-08 National Health Survey

OLDER PEOPLE

The proportion of people aged 65 years and over in Australia is projected to rise from 13% in 2006 to between 23% and 25% in 2056 (ABS 2008d). Increasing age is often associated with long-term health conditions, high rates of obesity, higher rates of disability and poorer self-assessed health status. Thus, as the population ages, the health of older people is likely to impact upon the overall health status of the Australian community.

In 2007-08, just over half (53%) of people aged 75 years and over suffered from arthritis, and one fifth (20%) had ischaemic heart disease. Another concern for older Australians is the proportion who are overweight or obese, which may arise due to sedentary lifestyles and poor diets. In 2007-08, three-quarters of people aged 65-74 years (75%) were considered to be overweight or obese.

The rate of disability among people aged 60 years and over is much higher than it is for younger age groups. This is further complicated by the fact that as people grow older the severity of their disability is likely to increase, particularly for those aged 75 years and over. Consequently, people in this age group are more likely to need assistance with activities in their personal life, such as health care, communication, meal preparation and mobility.

Many older people also have a caring role. In 2003, almost one quarter (24%) of men aged 75 years or over and 13% of women of the same age were carers (providing informal assistance to people with disabilities, long-term health conditions, or to those who were aged). One reason for the male carer rate being higher than the female rate in this age group may be that most older men are living with a spouse, who they may be caring for, whereas more older women have been widowed (ABS 2008e).

In addition, there is concern about the potential health costs of an ageing population. In 2009, the vast majority (96%) of people aged 75 years and over had seen a general practitioner in the last 12 months, and one quarter (25%) had been admitted to hospital (ABS 2010h). A large projected increase in the

number of people aged 85 years or over living in Australia (from 322,000 people in 2006 to between 1.7 million and 3.1 million people in 2056) has implications for the provision of aged care facilities (ABS 2008d).

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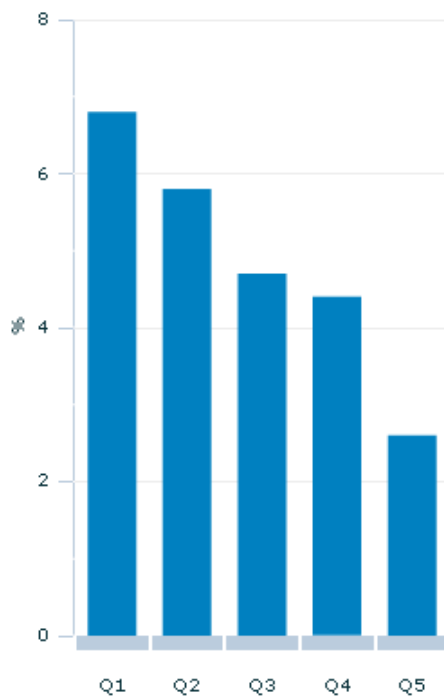
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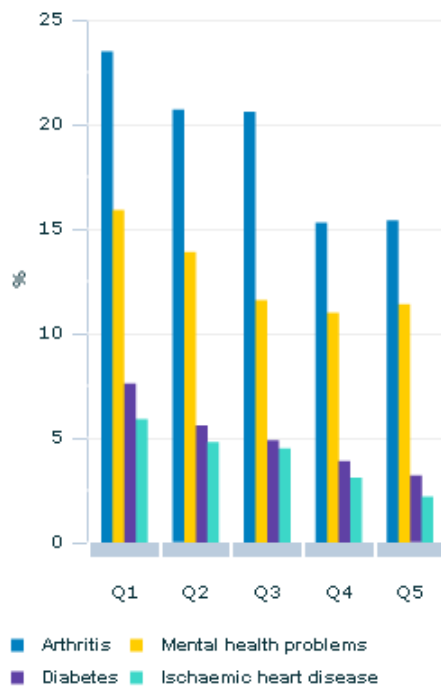
Profound or severe disability by relative disadvantage of area(a)(b) - 2007-08



Footnote(s): (a) People with a profound or severe disability as a proportion of the population aged 15 years and over living in each SEIFA quintile. (b) Q1 is the most disadvantaged quintile and Q5 is the least disadvantaged quintile.

Source(s): ABS data available on request, 2007-08 National Health Survey

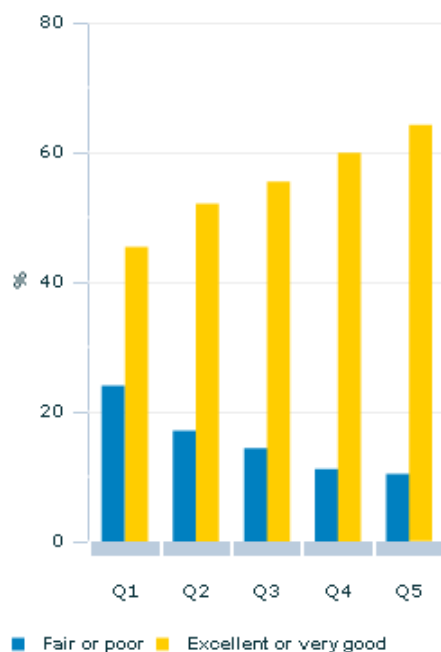
Selected long-term health condition by relative disadvantage of area(a)(b) - 2007-08



Footnote(s): (a) People with selected condition as a proportion of the population aged 15 years and over living in each SEIFA quintile. (b) Q1 is the most disadvantaged quintile and Q5 is the least disadvantaged quintile.

Source(s): ABS data available on request, 2007-08 National Health Survey

Self-assessed health by relative disadvantage of area(a)(b) - 2007-08



Footnote(s): (a) People with each self-assessed health status as a proportion of the population aged 15 years and

over living in each SEIFA quintile. (b)
Q1 is the most disadvantaged quintile
and Q5 is the least disadvantaged
quintile.

Source(s): ABS data available on
request, 2007-08 National Health
Survey

SOCIOECONOMIC DISADVANTAGE

Australians who live in areas with poorer socioeconomic conditions tend to have worse health than people who live in other areas. Previous analysis has shown that Australians living in the most disadvantaged areas have higher levels of health risk factors, and a lower use of preventative health services than others (ABS 2010b). However, the relationship between health and socioeconomic disadvantage is not straightforward, and the direction of causality is unclear. For example, low income can negatively impact housing standards or reduce access to medical services. However, people with chronic conditions may have a reduced ability to earn income and may, as a consequence, move to disadvantaged areas to access lower cost housing.

In 2007-08, 24% of people (aged 15 years and over) living in the most disadvantaged areas rated their health as fair or poor, compared with 10% of people living in the least disadvantaged areas. Chronic conditions were more prevalent amongst people living in the most disadvantaged areas as follows:

- 24% of people living in the most disadvantaged areas had arthritis, compared with 15% of those in the least disadvantaged areas
- 16% of people living in the most disadvantaged areas had mental or behavioural problems, compared with 11% of those in the least disadvantaged areas
- 8% of people living in the most disadvantaged areas had diabetes, compared with 3% of those in the least disadvantaged areas
- 6% of people living in the most disadvantaged areas had ischaemic heart disease, compared with 2% of those in the least disadvantaged areas

In addition, in 2007-08, there were higher proportions of people with a disability living in the most disadvantaged areas compared with those living in the least disadvantaged areas. The proportion of people with a profound or severe disability decreased with declining levels of disadvantage. Of people living in the most disadvantaged areas, 7% of people aged 15 years and over had a profound or severe disability, compared with 3% of people living in the least disadvantaged areas.

Health risk factors also varied across areas of socioeconomic disadvantage. In 2007-08, people aged 15 years and over, and living in the most disadvantaged areas, were more likely to be current smokers (30%) compared with those living in the least disadvantaged areas (13%). Similarly, around one third (32%) of people living in the most disadvantaged areas (aged 15 years and over) were categorised as obese, compared with under one fifth (18%) who lived in the least disadvantaged areas. However, the trend was reversed for the proportion of people who consumed alcohol at a level considered risky to their health - being slightly less common in the most disadvantaged areas (10%) compared with the least disadvantaged areas (13%).

Poor health among the socioeconomic disadvantaged population may have flow on consequences for mortality. A study of socioeconomic status and overall mortality (for 1998-2000) found that there was a relationship between death rates and levels of socioeconomic status. This resulted in a life expectancy gap of four years for males and two years for females between the highest and lowest socioeconomic groups (AIHW 2010b).

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LINKS TO OTHER DIMENSIONS OF PROGRESS

Because of the close relationships between many socioeconomic variables, improvements in health may assist progress in other areas and vice versa. A substantial body of evidence shows that lower socioeconomic status and poorer educational outcomes contribute to poorer health literacy and consequently poorer health. Likewise, poor health, particularly in childhood, can negatively affect an individual's educational outcomes, which in turn may affect an individual's labour market outcome and their ability to buy their own house in later life.

A healthy population with fewer sick people to care for allows economic resources to be used for other things, while a larger pool of healthy people means a greater potential supply of labour for the workforce. Conversely, the growth of the economy can help to provide funds, either to governments or individuals, to pay for better health prevention programs, hospitals and health care, and to maintain suitable sanitation and housing services. Moreover, the health industry is a very significant employer, while health spending accounted for about 30% of total government expenditure, and over 5% of household expenditure in 2008-09 (ABS 2009a).

Various types of economic activity also affect human health. The burning of fossil fuels, for example, is linked to types of air pollution and a variety of health concerns. The changing composition of the Australian economy also has an effect. A shift to more office-based work has helped (AIHW 2005), along with other factors such as OHS practices, to reduce the incidence of fatal accidents at work. However, more sedentary occupations may have long-term adverse health effects including lack of exercise and increased obesity.

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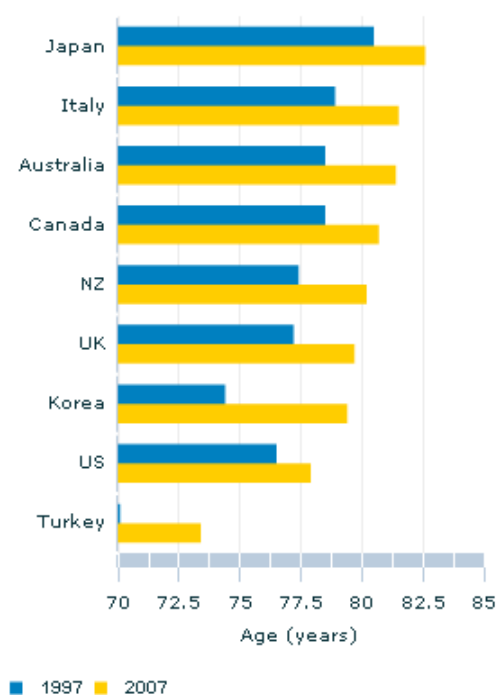
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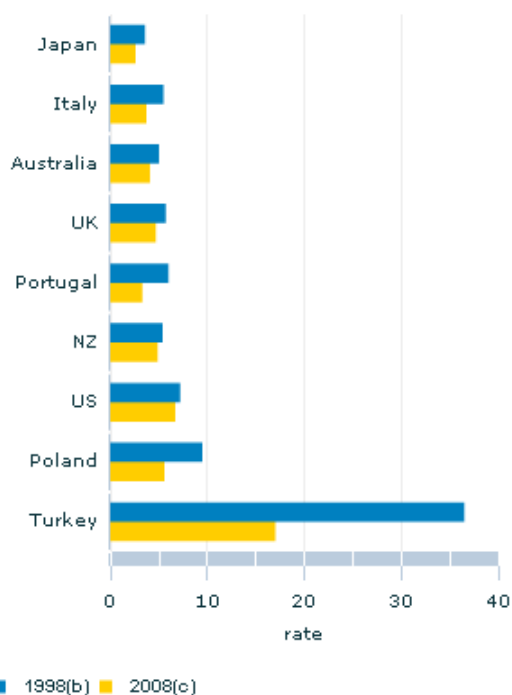
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Life expectancy at birth - selected OECD countries



Source(s): OECD Health Data 2010
ISSN 20743963 (online)

Infant mortality rate(a) - selected OECD countries



Footnote(s): (a) Deaths per 1,000 live births (b) 1996 for Korea. (c) 2007 for

Canada and Korea. 2006 for United States of America.

Source(s): OECD Health Data 2010
ISSN 20743963 (online)

INTERNATIONAL COMPARISONS

Life expectancy at birth

In 2007, Australians were among the longest lived OECD members, ranking fourth in life expectancy at birth for the total population (81 years). Australia was ranked sixth in the OECD for female life expectancy at birth (84 years) and fourth in male life expectancy (79 years).

Japan reported the longest life expectancy in 2007 for females: a girl born in Japan could expect to live for 86 years. Switzerland had the longest male life expectancy (80 years) in 2007. In 2007, Turkey had the lowest life expectancy of all OECD countries for females (76 years), and the Slovak Republic had the lowest life expectancy for males (71 years).

Of the OECD countries for which information is available, Korea experienced the greatest increase in life expectancy for both males and females during the period 1997-2007, where life expectancy for females increased from 78 years in 1997 to 83 years in 2007, and from 71 years in 1997 to 76 years in 2007 for men.

Infant mortality rate

Australia's infant mortality rate was 4.1 infant deaths per 1,000 live births in 2008. Luxembourg had the lowest infant mortality rate in the OECD with a rate of 1.8 per 1,000 live births. The two countries with markedly higher infant mortality rates than any other OECD countries were Turkey and Mexico with infant mortality rates of 17.0 per 1,000 live births and 15.2 per 1,000 live births respectively.

Given its overall wealth and level of development, the United States has a relatively high infant mortality rate at 6.7 per 1,000 live births in 2006 (latest available data), the fourth highest rate in the OECD. Factors such as the high level of teenage pregnancy and lack of free prenatal and perinatal care in the United States have been suggested as contributory factors underlying the higher observed infant mortality rate (OECD 2005).

All OECD countries achieved reductions in their infant mortality rate in the period between 1998 and 2008. Turkey, Portugal and Poland had large reductions in their infant mortality rate during this period. Infant mortality in Turkey went from 36.5 to 17.0 per 1,000 live births, in Poland from 9.5 to 5.6 per 1,000 live births, and in Portugal from 6.0 to 3.3 per 1,000 live births.

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HEALTH GLOSSARY

Aboriginal and Torres Strait Islander

Persons who identify themselves as being of Aboriginal and/or Torres Strait Islander origin.

Aboriginal and Torres Strait Islander death

The death of a person who is identified as being of Aboriginal and/or Torres Strait Islander origin on the Death Registration Form (DRF). From 2007, Aboriginal and Torres Strait Islander origin for deaths registered in South Australia, Western Australia, Tasmania, the Northern Territory and the Australian Capital Territory is also derived from the Medical Certificate of Cause of Death (MCCD).

Age-specific death rate

Age-specific death rates (ASDRs) are the number of deaths (occurred or registered) during the calendar year at a specified age per 1,000 of the estimated resident population of the same age at the mid-point of the year (30 June). Pro rata adjustment is made in respect of deaths for which the age of the deceased is not given.

Alcohol consumption risk level

Alcohol consumption risk levels in the long-term were derived from the average daily consumption of alcohol by persons aged 15 years and over for 3 days of the week prior to interview and are grouped into relative risk levels as defined by the National Health and Medical Research Council (NHMRC) in 2001 as follows:

Alcohol risk level(a)

Risk level	Consumption per day	
	Males	Females
Low risk	50 mLs or less	25 mLs or less
Risky	More than 50 mLs, up to 75 mLs	More than 25 mLs, up to 50 mLs
High risk	More than 75 mLs	More than 50 mLs

(a) One standard drink contains 12.5 mLs of alcohol.

It should be noted that risk level as defined by the NHMRC is based on regular consumption levels of alcohol whereas estimates of risk from the NHS do not take into account whether consumption in the reference week was more, less or the same as usual.

The level of long-term risk is associated with regular daily patterns of drinking. Drinking status information was also collected for those who did not consume any alcohol in the 7 days prior to interview. Categorised as:

- Last consumed more than one week to less than 12 months ago;
- Last consumed 12 months or more ago; and
- Never consumed.

Body Mass Index (BMI)

Calculated from height and weight information, using the formula weight (kg) divided by the square of height (m). To produce a measure of the prevalence of underweight, normal weight, overweight or obesity in adults, BMI values are grouped according to the table below which allows categories to be reported against both the World Health Organization (WHO) and National Health and Medical Research Council

(NHMRC) guidelines.

Body mass index, Adult

Underweight	Less than 18.5
Normal range	18.5 to less than 20.0
	20.0 to less than 25.0
Overweight	25.0 to less than 30.0
Obese	30.0 and greater

Separate BMI classifications were produced for children. BMI scores were created in the same manner described above but also took into account the age and sex of the child. There are different cutoffs for BMI categories (underweight, normal combined, overweight or obese) for male and female children. These cut-offs differ to those used in the adult BMI classification. For a detailed list of the cutoffs used to calculate BMI for children see 2007-08 National Health Survey Users' Guide (cat. no. 4363.0.55.001).

Carer

A person of any age who provides any informal assistance, in terms of help or supervision, to people with disabilities or long-term condition, or older people (i.e. aged 60 years and over). This assistance has to be ongoing, or likely to be ongoing, for at least six months. Assistance to a person in a different household relates to 'everyday types of activities', without specific information on the activities. Where the care recipient lives in the same household, the assistance is for one or more of the following activities:

- cognition or emotion
- communication
- health care
- housework
- meal preparation
- mobility
- paperwork
- property maintenance
- self-care
- transport.

For further detail, see Disability, Ageing and Carers: Summary of Findings, Australia, 2003 (cat. no. 4430.0).

Conditions

See 'long-term health condition'.

Current daily smoker

A respondent who reported at the time of interview that they regularly smoked one or more cigarettes, cigars or pipes per day.

Current smoker

A respondent who reported at the time of interview that they smoked cigarettes, cigars or pipes, either daily or less frequently.

Death

Death is the permanent disappearance of all evidence of life after birth has taken place. The definition excludes all deaths prior to live birth. For the purposes of the Deaths and Causes of Death collections of the Australian Bureau of Statistics (ABS), a death refers to any death which occurs in, or en route to Australia and is registered with a state or territory Registry of Births, Deaths and Marriages.

Disability Adjusted Life Year (DALY)

The DALY is a measure that combines information about the years of healthy life lost due to either premature mortality (relative to a standard life expectancy) or to years lived with a disability (here disability means any departure from full health, and includes conditions that range from the common cold to quadriplegia). It is an incidence based measure.

The burden of disease can be quantified by Disability Adjusted Life Years (DALY), for example, one DALY represents one lost year of healthy life due to disability or premature death. The more DALYs, the greater the burden.

Disability status

A disability or restrictive long-term health condition exists if a limitation, restriction, impairment, disease or disorder, has lasted, or is expected to last, for six months or more, and which restricts everyday activities.

It is classified by whether or not a person has a specific limitation or restriction. Specific limitation or restriction is further classified by whether the limitation or restriction is a limitation in core activities or a schooling/employment restriction only.

There are four levels of core activity limitation (profound, severe, moderate and mild) which are based on whether a person needs help, has difficulty, or uses aids or equipment with any of the core activities (self care, mobility or communication). A person's overall level of core activity limitation is determined by their highest level of limitation in these activities.

Employed

Persons aged 15 years or over who had a job or business, or who undertook work without pay in a family business, for a minimum of one hour, in the previous week. Includes persons who were absent from a job or business.

Exercise level

Based on frequency, intensity (i.e. walking, moderate exercise and vigorous exercise) and duration of exercise (for fitness, recreation or sport) in the two weeks prior to the interview. From these components, an exercise score was derived using factors to represent the intensity of the exercise:

- 3.5 for walking
- 5.0 for moderate exercise
- 7.5 for vigorous exercise

Scores were grouped into the following four categories:

Level of exercise	
Category	
Very low(a)	Score less than 100
Low	Score of 100 to less than 1,600
Moderate	Score of 1,600 to 3,200, or score of more than 3,200 but with less than 2 hours of vigorous exercise.
High	Score of more than 3,200 plus 2 hours or more of vigorous exercise

(a) Includes no exercise.

Inadequate exercise levels are sedentary and low exercise levels. Sedentary refers to sitting in one place for extended periods of time.

External causes of death

Deaths due to causes external to the body (for example Suicide, transport accidents, falls, poisoning etc).

ICD-10 codes V01-Y98.

Heart, stroke and vascular conditions

A subset of reported long-term conditions comprising the following:

- Angina and other ischaemic heart disease;
- Cerebrovascular disease;
- Heart failure,
- Oedema; and
- Diseases of arteries, arterioles and capillaries.

Health risk factors

Specific lifestyle and related factors impacting on health, including:

- Tobacco smoking;
- Alcohol consumption;
- Exercise;
- Body mass; and
- Dietary behaviours - fruit, vegetable and milk consumption.

Incidence

The number of new cases (of an illness or event, and so on) occurring during a given period.

Infant death

An infant death is the death of a live-born child who dies before reaching his/her first birthday.

Infant mortality rate

The number of deaths of children under one year of age in a calendar year per 1,000 live births in the same calendar year.

Ischaemic heart disease

A disease of the blood vessels supplying the heart muscle.

Leading causes of death

Leading causes of death are based on the total number of deaths attributed to specific causes. For further information on leading causes of death, see Causes of Death, Australia, 2008 (cat. no. 3303.0) Explanatory Notes 40-42, and Glossary.

Life expectancy

Life expectancy refers to the average number of additional years a person of a given age and sex might expect to live if the age-specific death rates of the given period continued throughout his/her lifetime.

Live birth

A live birth is the birth of a child who, after delivery, breathes or shows any other evidence of life such as a heartbeat.

Long-term health condition

A medical condition (illness, injury or disability) which has lasted at least six months, or which the respondent expects to last for six months or more. Some reported conditions were assumed to be long-term, including arthritis, cancer, osteoporosis, diabetes, rheumatic heart disease, heart attack, angina, heart failure and stroke. Rheumatic heart disease, heart attack, angina, heart failure and stroke are also

assumed to be current.

Mental disorder

A mental disorder (or mental illness) is a clinically recognisable set of symptoms or behaviours associated with distress and with interference with personal functions. The selected disorders explored by the 2007 National Survey of Mental Health and Wellbeing can be separated into three groups: anxiety, affective (mood) and substance use disorders.

Mortality

Death.

OECD

Organisation for Economic Co-operation and Development.

Potentially avoidable deaths

Potentially avoidable deaths are defined as mortality before the age of 75 years, from conditions which are potentially avoidable within the present health system. Avoidable deaths can be categorised into:

- preventable (amenable to screening and primary prevention), for example lung cancer which may be avoided through reduction of risk factors such as smoking or lack of exercise; and
- treatable (amenable to therapeutic interventions), for example bowel cancer for which mortality may potentially be avoided through effective surgery, chemotherapy and radiotherapy.

Some underlying causes of death are considered both treatable and preventable, such as ischaemic heart disease which may be preventable through diet and exercise and treatable through effective surgery. Conversely, an example of a death which is unavoidable is one from Dementia, where no substantial gains are available through either primary, secondary or tertiary prevention with current medical technology.

Only deaths of individuals under 75 years are considered potentially avoidable as beyond this age people may have several different health problems and determining a single underlying cause is difficult.

Profound or severe core-activity limitation

See 'Disability status' above.

Psychological distress

Derived from the Kessler Psychological Distress Scale -10 items (K10). This is a scale of non-specific psychological distress based on 10 questions about negative emotional states in the four weeks prior to interview. The K10 is scored from 10 to 50, with higher scores indicating a higher level of distress; low scores indicate a low level of distress. In this publication, scores are grouped as follows:

- Low 10-15;
- Moderate 16-21;
- High 22-29; and
- Very high 30-50.

Socio-Economic Index for Areas (SEIFA)

The ABS has developed four indexes to rank the level of social and economic wellbeing of a region. The analysis in this publication uses the Socio-Economic Indexes for Areas (SEIFA) Index of Disadvantage based upon the 2006 Census of Population and Housing. The SEIFA Index of Disadvantage is compiled from various characteristics of persons resident in particular areas and summarises attributes such as low income, low educational attainment, high unemployment, and jobs in relatively unskilled occupations. These areas are then ranked on a scale of relative disadvantage. In this publication the scale is divided into quintiles - with the first quintile representing the areas of greatest relative disadvantage and the fifth quintile representing the areas of least relative disadvantage. The quintiles are derived from area-based

Collection District level. For further information about SEIFAs see Chapter 6 of the [2007-08 National Health Survey: Users' Guide](#) (cat. no. 4363.0.55.001).

Self-assessed health status

A person's general assessment of their own health against a five point scale from excellent through to poor.

Standardised death rate (SDR)

Standardised death rates (SDRs) enable the comparison of death rates between populations with different age structures by relating them to a standard population. The ABS standard populations relate to the years ending in 1 (e.g. 2001). The current standard population is all persons in the Australian population at 30 June 2001. SDRs are expressed per 1,000 or 100,000 persons. There are two methods of calculating standardised death rates:

- The direct method - this is used when the populations under study are large and the age-specific death rates are reliable. It is the overall death rate that would have prevailed in the standard population if it had experienced at each age the death rates of the population under study.
- The indirect method - this is used when the populations under study are small and the age-specific death rates are unreliable or not known. It is an adjustment to the crude death rate of the standard population to account for the variation between the actual number of deaths in the population under study and the number of deaths which would have occurred if the population under study had experienced the age-specific death rates of the standard population.

Wherever used, the definition adopted is indicated.

Type of conditions

All reported long-term medical conditions were coded to a classification developed by the ABS for use in the 2001 National Health Survey, which is based on the tenth revision of the International Classification of Diseases and Health Related Problems (ICD-10). Further information can be found in the [2007-08 National Health Survey: Users' Guide](#) (cat. no. 4363.0.55.001).

Unemployed

People aged 15 years and over who were not employed but were actively looking for work in the previous four weeks, and were available to start work in the previous week.

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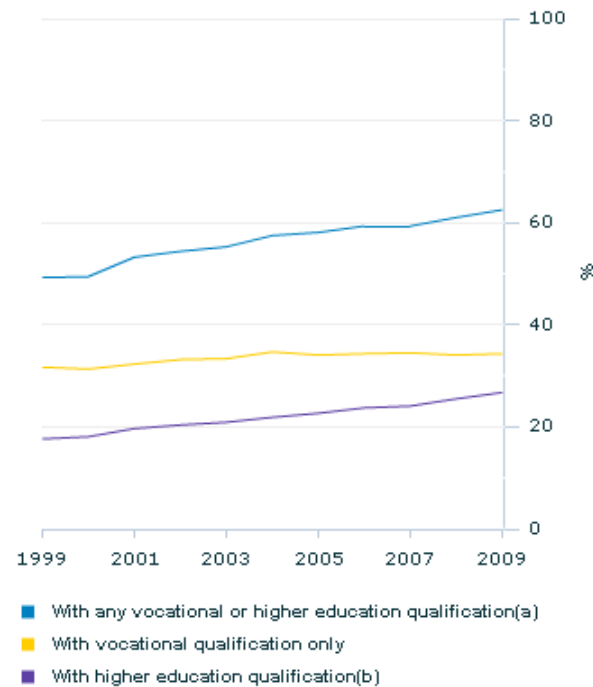
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Education & training



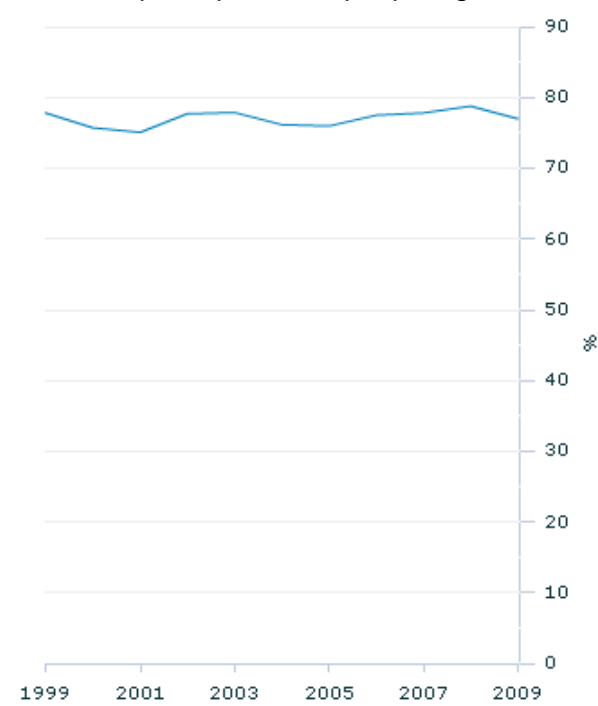
People aged 25-64 years with a vocational or higher education qualification

The people of Australia are becoming more highly educated. Over the past 10 years there has been an increase in the proportion of people who have a vocational or higher education qualification, from 49% to 63%.

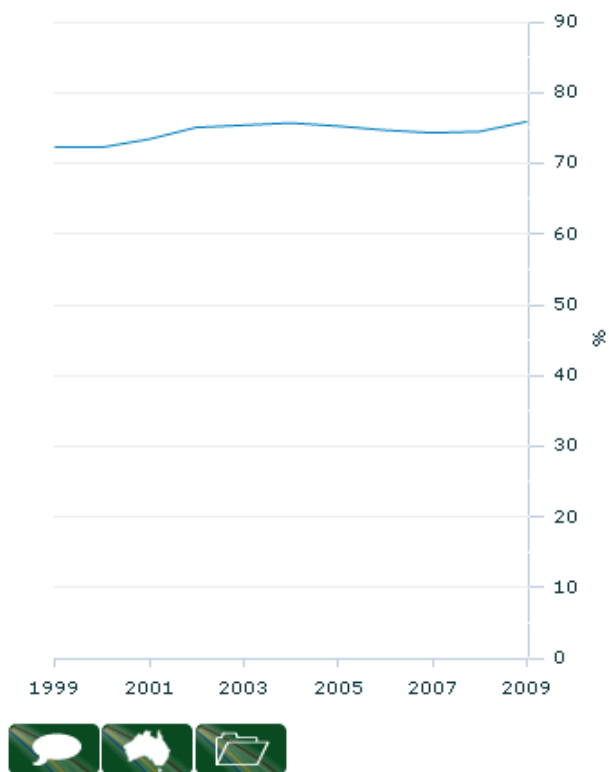
(a) Includes people with a qualification which could not be categorised into either vocational qualification only or higher education qualification. (b) Some of these people may also have a vocational qualification.



Education participation for people aged 15-19



Year 7/8 to Year 12 apparent retention rate



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EDUCATION, TRAINING AND PROGRESS

Education and training help people to develop knowledge and skills that may be used to enhance their own wellbeing and that of the broader community. For an individual, education is widely regarded as a key factor in developing a rewarding career. For the nation, having a skilled work force is vital in supporting ongoing economic development and in improving living conditions.

People can obtain knowledge and skills in many different fields and in a variety of ways, including through formal, non-formal and informal learning. Formal learning may take place in schools and universities or through vocational education and training. Non-formal learning can include structured training that does not result in an accredited qualification, for example, on-the-job training. Informal learning includes the acquisition of knowledge through non-institutionalised means, such as learning from family members, the community or through leisure activities. An ideal indicator of education, training and progress might measure the sum of all knowledge and skills held by people through formal, non-formal and informal learning. However, such an indicator does not currently exist. The commentary that follows mainly focuses on formal education in relation to the development of skills used in paid employment.

The headline indicator is the proportion of the population aged 25-64 years with a vocational or higher education qualification. Supplementary indicators of progress include education participation rates for people aged 15-19 years, and apparent school retention rates.

Further information is also provided for the different types of training that people receive, such as work-related training and informal training. In future editions of MAP, these will be included as supplementary progress indicators and will track changes over time.

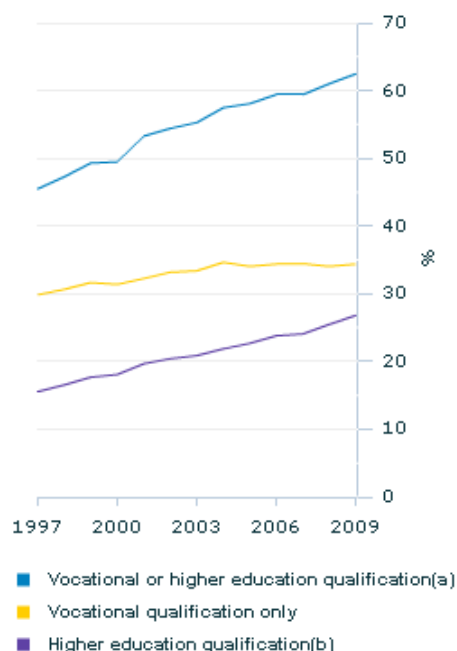
For a full list of definitions, please see the Education and training glossary.

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People aged 25-64 with a vocational or higher education qualification



Footnote(s): (a) Includes people with a qualification which could not be categorised into either vocational qualification only or higher education qualification. (b) Some of these people may also have a vocational qualification.

Source(s): ABS data available on request, 2002–2009 Survey of Education and Work; ABS data available on request, 1997–2001 Transition from Education to Work Survey

FURTHER EDUCATION

Obtaining a vocational or higher education qualification has a number of benefits. It allows individuals to engage with society, and may lead to fulfilling and rewarding careers. Collectively, a skilled workforce is also integral to the production of goods and services, contributing to the overall wealth and economic development of a nation.

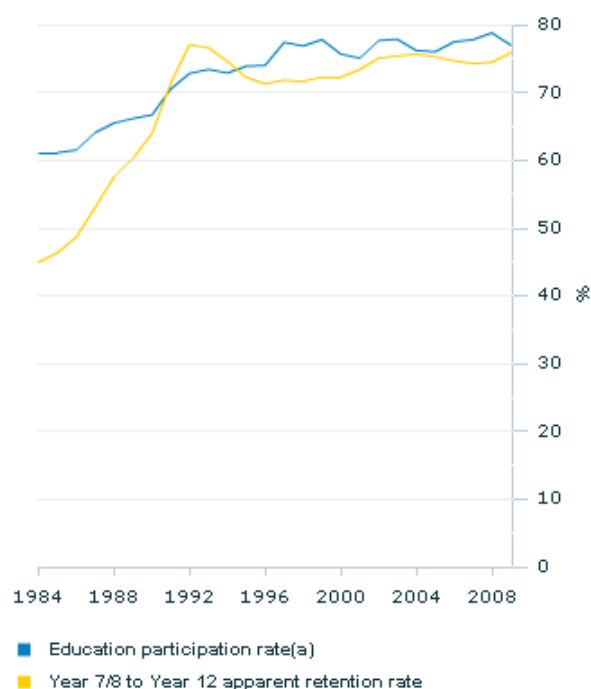
Between 1997 and 2009, there has been a continuing rise in the proportion of people with a vocational or higher education qualification (from 46% to 63%), continuing a trend seen for several decades.

This increase has largely been driven by the rise in the proportion of people with a higher education qualification (ie. a bachelor degree or above) - rising from 16% in 1997 to 27% in 2009. The proportion of people with a vocational qualification also increased, although at a much slower pace, rising from 30% in 1997 to 34% in 2009, with most of this increase occurring prior to 2005.

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Participation and retention rates



Footnote(s): (a) For 15-19 year olds. Refers to full-time students only.

Source(s): ABS Schools, Australia, 1999-2009 (cat. no. 4221.0); ABS data available on request, 2002–2009 Survey of Education and Work; ABS data available on request, 1984–2001 Transition from Education to Work Survey

PARTICIPATION IN EDUCATION

The longer people stay in school (especially those who complete year 12) the more likely they are to go on to further education. Participation is measured in two ways: firstly, by the proportion of 15-19 year olds who are students; and secondly, by the Year 7/8 to Year 12 apparent retention rate.

The increase in the proportion of people with a vocational or higher education qualification relates to a simultaneous increase in educational participation over the previous 25 years. For example, the proportion of 15-19 year olds who were part-time or full-time students (either in school or studying for a vocational or higher education qualification) increased from 61% in 1984 to 77% in 2009.

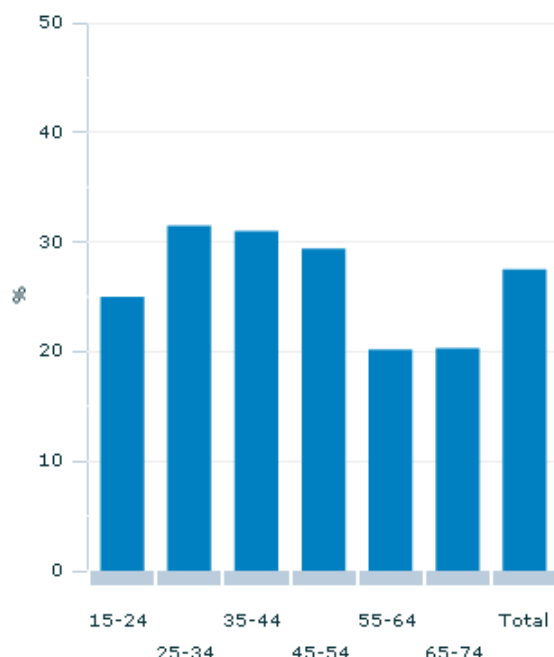
The apparent retention rate is an indicator which measures the extent to which young people are continuing their participation in secondary school education beyond the compulsory years. The proportion of students continuing through to Year 12 rapidly increased between 1984 and 1992 (rising from 45% to a peak of 77%) and has remained relatively stable, at around 75%, for the past eight years, and increased slightly to 76% in 2009.

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Participation in adult learning(a) - 2009



Footnote(s): (a) Proportion of all people in each age group. Participated in the 12 months prior to interview.

Source(s): ABS data available on request, 2009 Survey of Education and Training

ADULT LEARNING

Adult learning (or non-formal learning) supplement formal educational qualifications by providing other ways of acquiring skills and knowledge that do not result in accredited qualifications.

One shortcoming of formal education is that it may not adequately provide graduates with the practical skills required in the workplace. Adult learning is therefore viewed as valuable in cultivating flexible and well-rounded employees and citizens. This kind of learning enables individuals to take their place in a skilled and changing labour force, to lead fulfilling lives, and to be active members of the community.

Adult learning includes, but is not limited to, work-related training, hobby and recreation courses (such as jewellery making and dancing), adult education courses (such as introduction to computing) and first aid courses.

In 2009, over a quarter of people (28%) aged between 15-74 years had participated in adult learning in the 12 months prior to interview. After 'requirement for a job' (46%), the most common reason why people participated in adult learning was for 'personal interest or enjoyment' (23%), and close to one in ten people (9%) said it was to 'improve general educational skills.'

There was some variation in the proportion of people who participated in adult learning across the age groups. Those aged between 25-54 years were the most likely to have participated in adult learning compared with all other age groups and this reflects their higher rates of employment. For example, almost one-third (32%) of 25-34 year olds had participated in adult learning, compared with one-fifth of 55-64 and 65-74 year olds.

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Participation in work-related training(a) - 2009

WORK-RELATED TRAINING

Work-related training is one example of adult learning (or non-formal learning). With businesses adopting new technologies and older Australians remaining in the workplace for longer, work-related training plays a crucial role in developing and sustaining skilled and competent employees. For the individual, work-related training may help enhance personal and professional development and build new capabilities for career advancement or a change in occupation. For businesses, it can improve workplace performance and productivity.

In 2009, almost three-quarters (74%) of employed people had participated in work-related training in the 12 months prior to interview. A large proportion of these people (72%) had completed the training during paid work hours. Persons employed full-time were more likely to participate in work-related training than those employed part-time (79% compared with 62%), most likely due to those employed part-time having less contact hours at work (ABS 2009a). A greater proportion of employed people in the public sector (80%) had participated in work-related training compared with those in the private sector (73%).

For more commentary on work-related training see [Older Australians](#).

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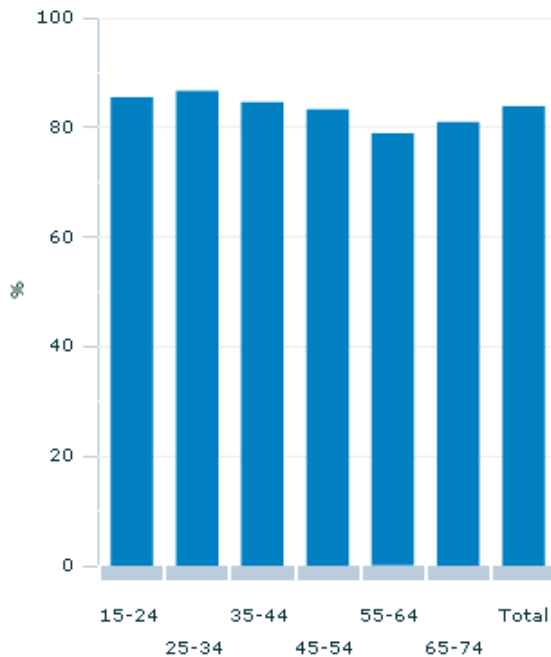
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Participation in informal learning(a) - 2009



Footnote(s): (a) Proportion of all people in each age group. Participated in the 12 months prior to interview.

Source(s): ABS data available on request, 2009 Survey of Education and Training

INFORMAL LEARNING

Informal learning includes learning from family members, from the community or learning through leisure activities. Informal learning is distinct from adult learning, but does help to supplement formal educational qualifications by providing other ways of acquiring skills and knowledge.

In 2009, the majority of people (84%) had participated in a selected informal learning activity. The main activities in which they had participated were: learning by trying things out (61%), using computers or the Internet to learn (58%), and learning by watching or getting help and advice from others (54%).

Learning by trying things out was the main informal learning activity for all age groups, except for 15-24 year olds, where using computers or the Internet was the main informal learning activity (64%). The proportion of people using computers or the Internet to learn decreased as age increased (for example, 64% of 15-24 year olds compared with 45% of 65-74 year olds). A similar pattern was evident for those who participated in informal learning by watching, getting help or advice from others (60% of 15-24 year olds reported this way of learning compared to 46% of 65-74 year olds).

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PROGRESS OF AUSTRALIANS

The level of education attained by a particular population group can be an indicator of their social capability or their socioeconomic status, and may help explain low or high levels of wellbeing in other areas of social concern.

Progress indicators for Education and training show different levels and rates of change across different population groups within Australia. For example, there are differences in the educational outcomes of older and younger Australians, men and women, Aboriginal and Torres Strait Islander people, migrants, and state or territory residents.

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YOUNGER AUSTRALIANS

Younger adult Australians are more likely to participate in education, or to hold a vocational or higher education qualification, than older Australians. In 2009, 58% of 15-24 year olds were attending an educational institution compared with 15% of 25-34 year olds and declining proportions in the older age groups. The proportion of people who had a vocational or higher education qualification was greatest for those aged 25-34 years (69%). This reflected a similar pattern seen a decade earlier in 1999.

While those aged between 25-34 years were the most likely to hold a vocational or higher education qualification in 2009 (69%), the proportion of people who held such qualifications increased for all age groups between 1999 and 2009. This was partly because of increased educational participation across most age groups, but it also reflects the age cohort influence over time as more educated people move into the older age groups.

Education participation and vocational or higher education qualifications

Age group (years)	Education participation rate		People with a vocational or higher education qualification	
	May 1999 %	May 2009 %	May 1999 %	May 2009 %
15-24	56.0	58.1	22.7	26.5
25-34	13.2	14.6	52.9	68.6
35-44	8.8	9.1	53.0	64.3
45-54	4.6	6.5	48.5	61.1
55-64	2.0	2.7	37.9	53.9
Total 25-64	7.9	8.6	49.3	62.5
Total 15-64	18.1	18.9	43.7	55.0

Source: ABS Survey of Education and Work Australia, 2009 (cat. no. 6227.0); ABS data available on request, 2009 Survey of Education and Work; ABS data available on request, 1999 Transition from Education to Work Survey

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OLDER AUSTRALIANS

There has been an increasing focus on the education of older Australians and on lifelong learning in recent years, with discussions focusing on the need to develop and update the knowledge and skills required to meet changes in the labour market. The education of older Australians, through both formal and non-formal means, is one way of increasing people's capacity to enter, remain in, or return to work. Education can also enrich the lives of older people by providing them with opportunities to develop new, or extend existing, interests and hobbies during their retirement.

Over the past decade, the educational attainment and participation of older Australians has increased. In 2009, older Australians (aged 55-64 years) were more likely to hold a vocational or higher education qualification (54%), compared with those of the same age in 1999 (38%). The same pattern was reflected among people aged 45-54 years (61% in 2009 compared with 49% in 1999). This is partly due to the cohort influence of younger qualified people moving into the older cohorts as they age. However, over this period educational participation also increased for older Australians.

While older Australians have considerably lower rates of attainment and educational participation than younger Australians, they have more comparable rates of engagement in informal learning. In 2009, around four in five older Australians engaged in informal learning compared with 85% for those aged 54 years and under.

Education participation and vocational or higher education qualifications

Age group (years)	Education participation rate		People with a vocational or higher education qualification	
	May 1999 %	May 2009 %	May 1999 %	May 2009 %
15-24	56.0	58.1	22.7	26.5
25-34	13.2	14.6	52.9	68.6
35-44	8.8	9.1	53.0	64.3
45-54	4.6	6.5	48.5	61.1
55-64	2.0	2.7	37.9	53.9
Total 25-64	7.9	8.6	49.3	62.5
Total 15-64	18.1	18.9	43.7	55.0

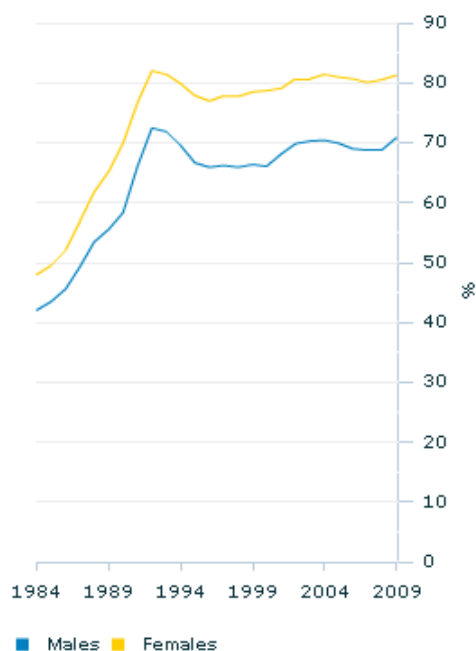
Source: ABS Survey of Education and Work Australia, 2009 (cat. no. 6227.0); ABS data available on request, 2009 Survey of Education and Work; ABS data available on request, 1999 Transition from Education to Work Survey

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Year 7 or 8 to Year 12 apparent retention rate(a) by sex



Footnote(s): (a) Refers to full-time students only.

Source(s): ABS Schools, Australia 1969-2009 (cat. no. 4221.0)

MEN AND WOMEN

Changes in social attitudes towards the roles and responsibilities of men and women in the latter part of the last century have resulted in an increase in women's educational participation and attainment. As a result, the difference in overall attainment between men and women has become less pronounced.

In 2009, proportionally more young women (aged 20-24 years) had a vocational or higher education qualification than young men (48% compared with 41%). This was also the case for men and women under the age of 35. However, for people aged 35 years and over, the opposite was true with proportionally more men than women holding a vocational or higher education qualification.

For the 25-64 year age group as a whole, proportionally more men had a vocational or higher education qualification than women, but this difference is declining. Between 1999 and 2009, the proportion of women (aged 25-64 years) with a vocational or higher education qualification increased from 44% to 60%. In 1999, there was a 12 percentage point difference in the proportion of men (55%) and women (44%) aged 25-64 who had a vocational or higher education qualification. This difference had decreased to 5 percentage points by 2009 (65% for men and 60% for women). This may in part reflect a cohort effect with older, less qualified people, moving out of the 25-64 year age group and younger people with qualifications moving into the group.

Not surprisingly, changes in attainment are consistent with changes in participation over this period. The Year 7/8 to Year 12 apparent retention rate showed that since the mid 1980s female students have been more likely than male students to continue through secondary school to Year 12. In 2009, the Year 12 apparent retention rate for female students was 81% compared with 71% for male students.

People with a vocational or higher education qualification

1999

2009

Age group (years)	Males %	Females %	Males %	Females %
15-19	3.6	5.0	6.3	9.2
20-24	38.6	43.3	41.0	48.0
25-34	56.0	49.9	66.8	70.4
35-44	58.5	47.6	67.3	61.4
45-54	55.6	41.4	64.3	58.0
55-64	47.5	28.3	61.6	46.5
Total 25-64	55.2	43.5	65.2	59.8
Total 15-64	47.9	39.5	56.4	53.6

Source: ABS data available on request, 2009 Survey of Education and Work; ABS data available on request, 1999 Transition from Education to Work Survey

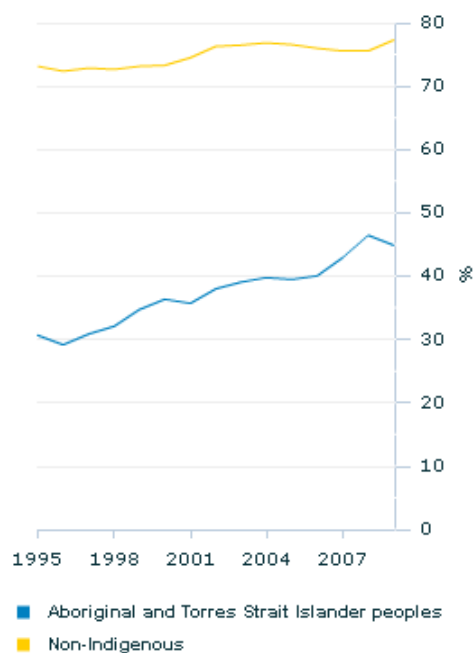
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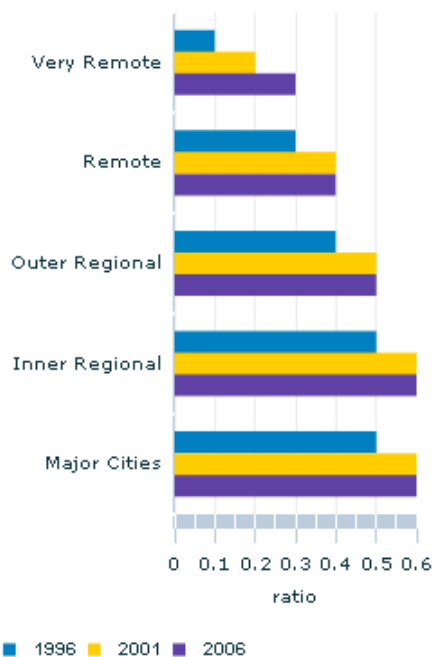
Year 7 or 8 to Year 12 apparent retention rate(a)



Footnote(s): (a) Refers to full-time students only.

Source(s): ABS Schools, Australia 1995-2009 (cat. no. 4221.0)

Aboriginal and Torres Strait Islander to non-Indigenous attainment ratios(a)



Footnote(s): (a) Attainment of vocational or higher education qualifications for persons aged 25-64. A ratio of less than one implies Aboriginal and Torres Strait Islander disadvantage.

Source(s): ABS data available on request, 1996, 2001 and 2006, Census of Population and Housing

ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLES

A key element in 'closing the gap' between Aboriginal and Torres Strait Islander Australians and non-Indigenous Australians relates to educational participation and attainment. While the education gap has narrowed somewhat over recent years, levels of educational participation and attainment of Aboriginal and Torres Strait Islander Australians still remain well below those of non-Indigenous Australians. This is due to a range of factors including, economic disadvantage, social marginalisation, health problems, differences in community expectations and geographical isolation.

Between 1995 and 2009, apparent school retention rates for full-time Aboriginal and Torres Strait Islander students (from Year 7/8 to Year 12) increased from 31% to 45%, indicating that more Aboriginal and Torres Strait Islander students have progressed through to Year 12.

In addition, the proportion of Aboriginal and Torres Strait Islander Australians aged 25-64 years with a vocational or higher education qualification increased from 32% in 2002 to 40% in 2008 (ABS 2009b). For those who reported their level of qualification, the proportion of Aboriginal and Torres Strait Islander Australians with a certificate or diploma was 26% in 2002 and 30% in 2008. Over the same period, the proportion with a bachelor degree or above increased from 5% to 7%.

The Census of Population and Housing showed gains in Aboriginal and Torres Strait Islander non-school qualification attainment levels between 1996 and 2006. While these gains were observed across all geographic areas, the gap between the Aboriginal and Torres Strait Islander and non-Indigenous attainment rates increased with increasing geographic remoteness.

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MIGRANTS

Since the mid-1990s, Australia's immigration program has increasingly been driven by skilled migration. In 2007-08, Skilled visas accounted for over two-thirds (68%) of the 2007-08 Migration Program (ABS 2009c). In 2007, three-fifths of migrants who had arrived after 1997, and were aged 15 years and over, had a vocational or higher education qualification on arrival.

Levels of educational attainment have generally increased among successive waves of migration. Over three-fifths (63%) of migrants who arrived between 2005 and 2007 (aged 15 years and over) had a vocational or higher education qualification on arrival compared with 55% of those who arrived between 2002 and 2004; 52% of those who arrived between 1995 and 2001; and 45% of those who arrived between 1986 and 1994.

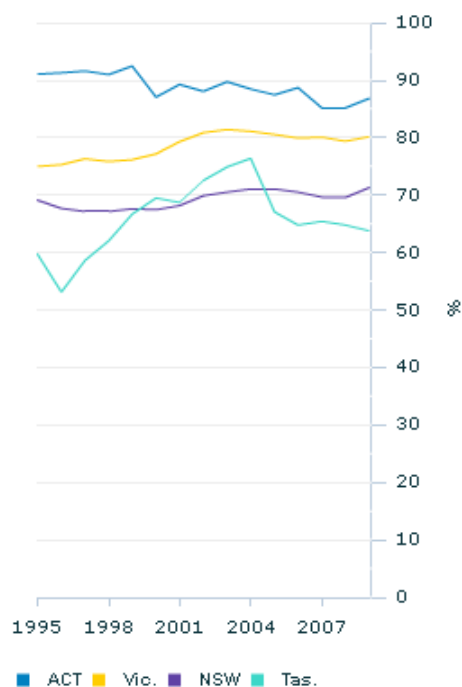
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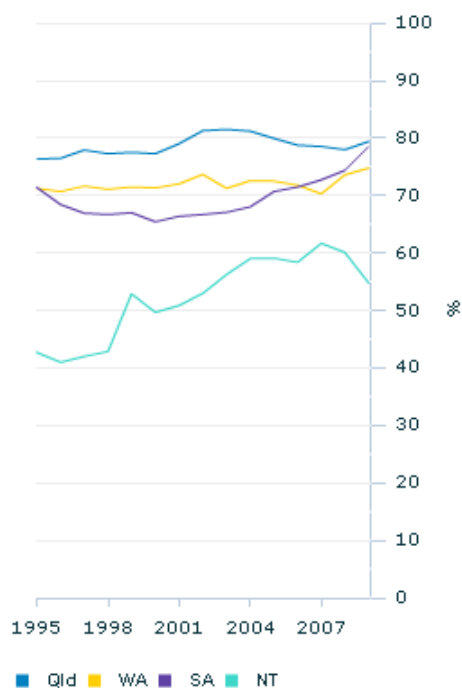
Year 7 to Year 12 apparent retention rate(a) - selected states and territories(b)



Footnote(s): (a) Refers to full-time students only. (b) States/territories in which secondary school commences in Year 7.

Source(s): ABS Schools, Australia 1995-2009 (cat. no. 4221.0)

Year 8 to Year 12 apparent retention rate(a) - selected states and territories(b)



Footnote(s): (a) Refers to full-time students only. (b) States/territories in which secondary school commences in year 8

Source(s): ABS Schools, Australia 1995-2009 (cat. no. 4221.0)

STATES AND TERRITORIES

In 2009, the proportion of 25-64 year olds who had a vocational qualification as their highest qualification ranged from a high of 38% in Queensland to 24% in the Australian Capital Territory. The differences in the proportions of people with a higher education qualification were more pronounced - ranging from a high of 47% in the Australian Capital Territory to 21% in Tasmania.

These differences may be related to a number of factors, including: differences in the demand for different types of skilled labour, differences in the age distribution of the populations, different composition in the types of industry, and differences in the proportions of skilled migrants (both interstate and overseas) attracted to a particular state or territory. In 1999, there was less disparity between the states and territories in the proportion of people with a vocational qualification, ranging from a high of 34% in New South Wales to 28% in the Australian Capital Territory.

In 2009, Year 12 apparent retention rates differed substantially across the states and territories, ranging from 87% in the Australian Capital Territory to 55% in the Northern Territory. Since the mid 1990s the general pattern in the Year 12 apparent retention rate has been one of relative stability or slight increase for most of the states and territories.

Level of highest vocational or higher education qualification for people aged 25-64 years

	1999			2009		
	Vocational qualification %	Higher education qualification %	Total %	Vocational qualification %	Higher education qualification %	Total %
NSW	33.6	18.6	52.2	35.2	28.8	65.3
Vic.	28.9	19.7	48.6	29.7	29.9	60.7
Qld	32.4	14.3	46.7	38.1	22.0	61.5
SA	31.3	14.1	45.3	35.2	21.7	58.4
WA	32.4	17.2	49.5	36.5	24.5	62.4
Tas.	30.4	12.7	43.1	36.5	20.6	58.6
NT	28.6	16.6	45.2	34.7	24.2	60.7
ACT	28.1	33.0	61.0	24.1	46.9	73.0
Aust.	31.7	17.7	49.3	34.4	26.8	62.5

Source: ABS data available on request, 2009 Survey of Education and Work;
ABS data available on request, 1999 Transition from Education to Work Survey

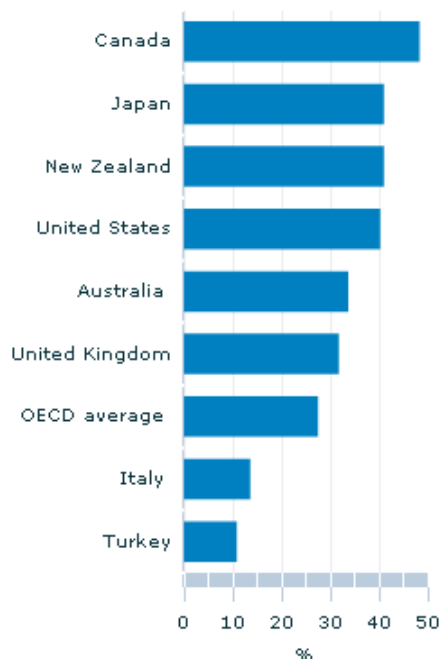
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People aged 25-64 with tertiary education - selected OECD countries - 2007



Source(s): OECD, 2009, Education at a Glance 2009: OECD indicators

INTERNATIONAL COMPARISONS

Due to differences in the way that qualifications are classified internationally, there is currently no OECD indicator that can be directly compared with the headline progress indicator of people aged 25-64 years with a vocational or higher education qualification. However, one important OECD indicator that can be compared internationally is the proportion of 25-64 year olds with a tertiary education.

In 2007, the OECD reported that 34% of Australians aged 25-64 years had a tertiary education, ranking it the seventh highest (equal with Norway) amongst the 30 OECD member countries, and six percentage points above the OECD average (28%).

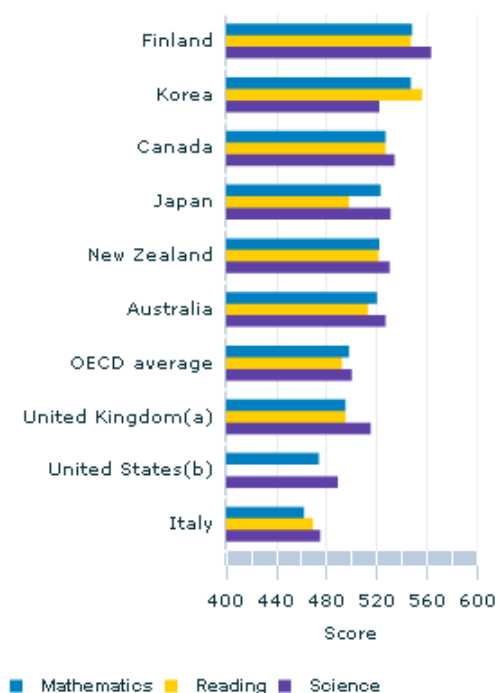
There was a wide variation in the proportion of 25-64 year olds who had at least one tertiary qualification - ranging from 11% in Turkey to 48% in Canada.

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Average literacy scores for selected OECD countries



Footnote(s): (a) Data for the United Kingdom in mathematics is not statistically different to the OECD average in mathematics. (b) Data for the United States in reading was not published due to technical reasons.

Source(s): OECD PISA 2006, Science competencies for tomorrow's world, figure 6.20b (maths), figure 6.8a (reading), figure 2.11c (science)

OECD AVERAGE LITERACY SCORES

The OECD periodically publishes data on average reading, mathematics and science literacy scores under its Programme for International Student Assessment (PISA). PISA aims to assess whether students, nearing the end of compulsory education, have acquired the knowledge and skills necessary for full participation in society. Around 400,000 students were selected to participate in PISA 2006, a sample representing about 20 million 15 year olds in the schools of the 57 participating countries (OECD 2007).

In all three literacy assessments in 2006, Australia scored higher than the OECD average. Of the OECD countries surveyed Australia had an 'upper rank' of 4th in science, 5th in reading and 6th in mathematics. Both Korea and Finland ranked highest in mathematics, while Korea ranked highest in Reading and Finland ranked highest in Science (OECD 2007).

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Education & training

LINKS TO OTHER DIMENSIONS OF PROGRESS

The ongoing development of people's knowledge and skills influences, and is influenced by, many other dimensions of progress. As a nation, increased education and training may support economic development by providing people with specialised skills capable of increasing levels of productivity and extending the range and quality of goods and services produced. It may also serve to improve our capability to address public health and welfare issues and various environmental problems. At an individual level, educational participation and attainment can improve outcomes in employment, income and health.

In turn, the opportunity to participate in education and training is influenced by social, economic and individual factors, including: health and economic circumstances, support mechanisms and access.

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EDUCATION AND TRAINING GLOSSARY

Adult learning

See 'non-formal learning'.

Apparent retention rates

In this chapter apparent retention rates are calculated by dividing the number of full-time students in Year 12 by the number of full-time students in the base year and converting the figure into a percentage. In this chapter the base year is Year 7 in New South Wales, Victoria, Tasmania and the Australian Capital Territory and Year 8 in Queensland, South Australia, Western Australia and the Northern Territory. These years represent the commencement of secondary school in the respective state or territory.

Existing apparent retention rates do not take into account a range of factors, and readers are cautioned to exercise care in interpreting the measure. Students may repeat a year of education, or migrate between institutions, states/territories and in or out of Australia. An increasing number of students are considered to be part-time and there are also differing enrolment policies leading to different age/grade structures between states and territories. All these factors affect the number and composition of the student population when calculating apparent retention rates.

Education participation rate

For any group within the population, it is the number of people attending an educational institution (either full or part time) expressed as a percentage of the population in that group.

Educational institution

Any institution whose primary role is education. Included are schools, higher education establishments, colleges of technical and further education, public and private colleges, etc. Excluded are institutions whose primary role is not education.

Formal learning

Refers to learning which is structured, taught learning in institutions and organisations and leads to a recognised qualification issued by a relevant body, in recognition that a person has achieved learning outcomes or competencies relevant to identified individual, professional, industry or community needs. A learning activity is formal if it leads to a learning achievement that is possible to position within the Australian Qualifications Framework (AQF) and includes workplace training if such training results in a qualification.

Higher education qualifications

Include Postgraduate Degree, Master Degree, Graduate Diploma, Graduate Certificate and Bachelor Degree.

Indigenous

Refers to people who identified themselves, or were identified by another household member, as being of Aboriginal and/or Torres Strait Islander origin.

Aboriginal and Torres Strait Islander to non-Indigenous attainment ratio

The ratio of Aboriginal and Torres Strait Islander to non-Indigenous attainment of a vocational or higher education qualification is calculated by dividing the Aboriginal and Torres Strait Islander rate of attainment

by the non-Indigenous rate of attainment. A ratio of less than one implies Aboriginal and Torres Strait Islander disadvantage.

Informal learning

Refers to unstructured, non-institutionalised learning activities that are related to work, family, community or leisure. Activities may occur on a self-directed basis, but are excluded from scope if there is no specific intention to learn.

Non-formal learning

Non-formal learning (adult learning) refers to structured, taught learning, but differs from formal learning in that it does not lead to a qualification within the AQF. It includes non-accredited workplace training, that is, training that does not lead to a recognised qualification.

Some examples of types of non-formal courses include:

- Adult education courses (eg. introduction to computing)
- Hobby and recreation courses (eg. ceramics, jewellery making, dancing)
- Personal enrichment courses (eg. personal finance, sports instruction, public speaking)
- Work-related courses (eg. manager development, job search training, induction courses)
- First aid courses
- Bridging courses
- Statements of attainment

OECD

Organisation for Economic Co-operation and Development

OECD tertiary education

Tertiary-type A education:

Tertiary-type A programmes are largely theory-based and are designed to provide sufficient qualifications for entry to advanced research programmes and professions with high skill requirements, such as medicine, dentistry or architecture. Tertiary-type A programmes have a minimum cumulative theoretical duration (at tertiary level) of three years' full-time equivalent, although they typically last four or more years. These programmes are not exclusively offered at universities. Conversely, not all programmes nationally recognised as university programmes fulfil the criteria to be classified as tertiary-type A. Tertiary-type A programmes include second degree programmes like the American Master. First and second programmes are sub-classified by the cumulative duration of the programmes, *i.e.*, the total study time needed at the tertiary level to complete the degree.

Tertiary-type B education:

Tertiary-type B programmes are typically shorter than those of tertiary-type A and focus on practical, technical or occupational skills for direct entry into the labour market, although some theoretical foundations may be covered in the respective programmes. They have a minimum duration of two years full-time equivalent at the tertiary level.

People with a vocational or higher education qualification

Proportion of people with either a vocational or higher education qualification (includes those whose level could not be determined).

There has been a break in the time series between 1997 and 2009 that is considered to have impacted on the comparability of data relating to qualifications: In 2001, the ABSCQ was replaced by the Australian Standard Classification of Education (ASCED) cat. no. 1272.0. The ASCED is a national standard classification, which can be applied to all sectors of the Australian education system.

Remoteness area

Within a state or territory, each Remoteness Area represents an aggregation of non-contiguous geographical areas which share common characteristics of remoteness, determined in the context of Australia as a whole. The delimitation criteria for Remoteness Areas are based on the Accessibility/

Remoteness Index of Australia (ARIA). ARIA measures the remoteness of a point based on the physical road distances to the nearest Urban Centre. Not all Remoteness Areas are represented in each state or territory.

There are six Remoteness Areas in this structure:

- Major Cities of Australia;
 - Inner Regional Australia;
 - Outer Regional Australia;
 - Remote Australia;
 - Very Remote Australia;
 - Migratory (not in-scope of the 2008 NATSISS).
- Vocational education qualifications**

Include Advanced Diploma, Diploma and Certificates I to IV (and certificate not further defined).

Work-related training

In this section, work-related training is measured as the proportion of employed people (aged 15-74 years) engaged in non-formal work-related training. Work-related training data is not comparable to data from previous years as the definition 'work-related training' was redefined in 2009 to 'non-formal work-related training.' Additionally, formal, non-formal and informal learning distinctions were new to the 2009 Survey of Education and Training.

Non-formal learning was classified as being a work-related course if the main purpose for participating in the learning was one of the following:

- to get a job
- to get a different job or promotion
- it was a requirement of their job
- wanted extra skills for their job
- to start own business
- to develop existing business
- to try for a different career

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EDUCATION AND TRAINING REFERENCES

Australian Bureau Statistics, 2009a, Education and Training Experience, cat. no. 6278.0, ABS, Canberra.

Australian Bureau Statistics, 2009b, National Aboriginal and Torres Strait Islander Social Survey, 2008, cat. no. 4714.0, ABS, Canberra.

Australian Bureau Statistics 2009c, Perspectives on Migrants, 2009, cat. no. 3416.0, ABS, Canberra.

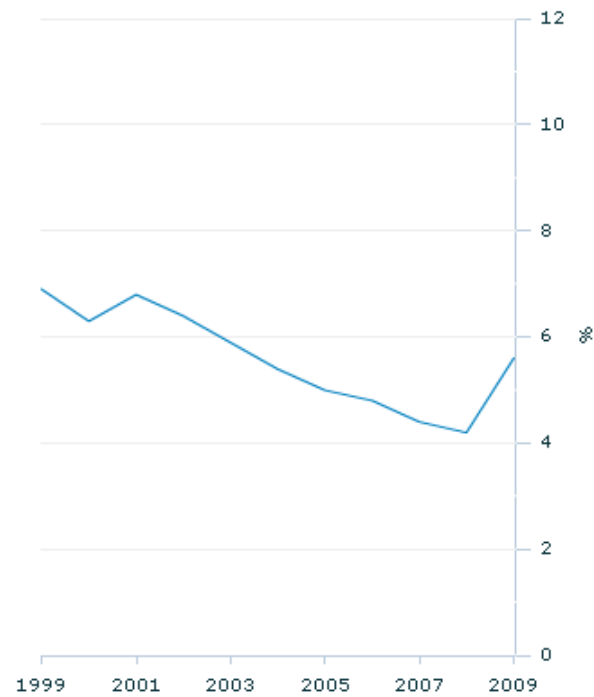
OECD, 2007, PISA 2006 Science competencies for tomorrow's world, volume 1: analysis, OECD, France, <www.oecd.org>.

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Work



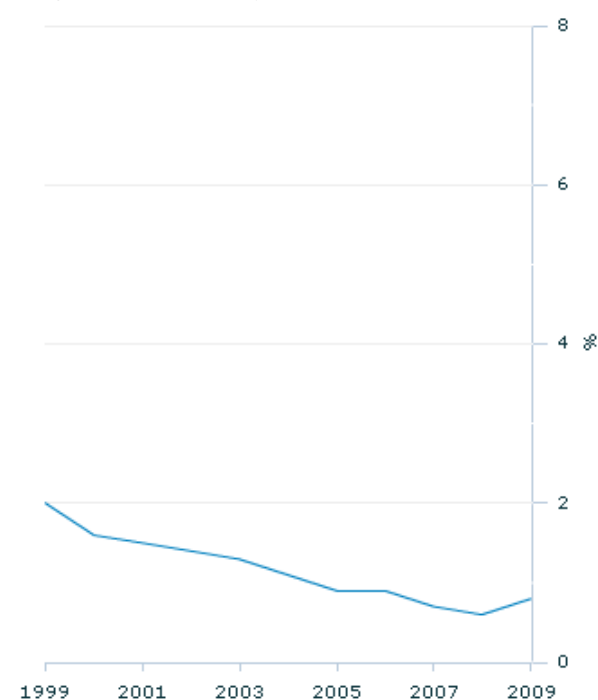
Unemployment rate(a)

Over the last decade the annual average unemployment rate for Australia has generally decreased, from 6.9% in 1999 to 5.6% in 2009. However, between 2008 and 2009 the unemployment rate increased by 1.4 percentage points, reflecting the recent economic downturn.

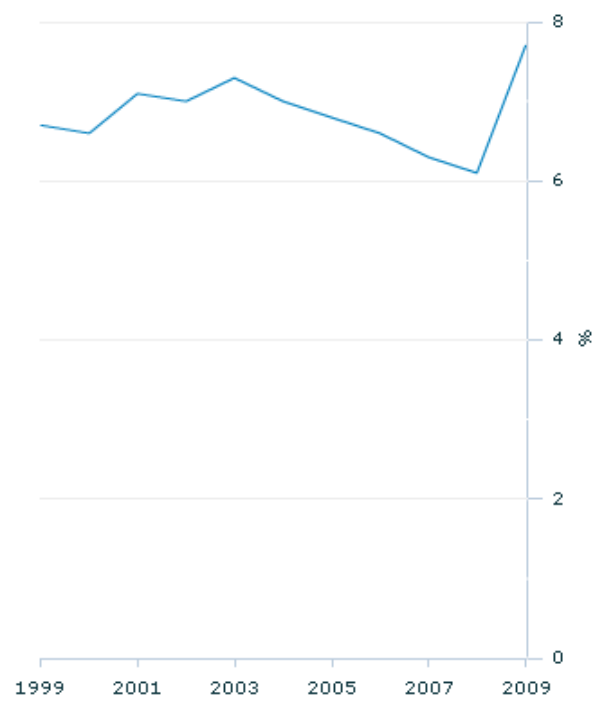
(a) Annual average.



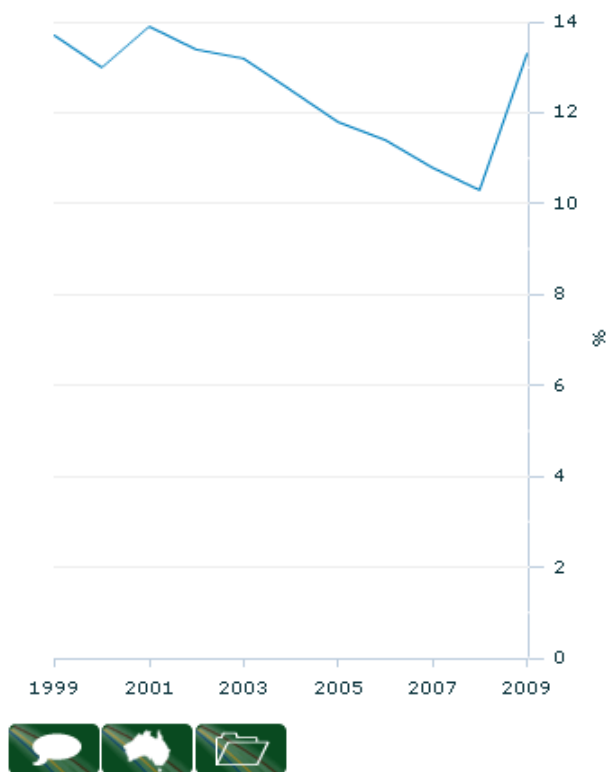
Long-term unemployment rate



Underemployment rate



Labour force underutilisation rate



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WORK AND PROGRESS

Paid work is the way in which most people obtain the economic resources they need for day-to-day living. Having paid work contributes to a person's sense of identity and self-esteem, while people's involvement in paid work also contributes to economic growth and development.

The number of people in Australia in paid employment has grown steadily over the past three decades. In 1979, there were 6.1 million employed people in Australia. By 2009, largely due to population growth, this had increased to 10.8 million. Since 1979, the employment to population ratio, that is the proportion of the population who are working, has increased from 57% to 62%.

Once in paid employment, there are many aspects of work that affect people's wellbeing, such as the hours they work, their levels of remuneration, job satisfaction and security, the opportunity for self development, and their interaction with people outside of the home. An ideal indicator of whether life in Australia is getting better would reflect these and other aspects of work to measure the extent to which Australians' work preferences are satisfied.

While a single indicator covering all these aspects is not available, useful indicators of progress may be obtained by looking at the extent to which people's aspirations for work, or more work, are satisfied. The unemployment rate is a widely used measure of underutilised labour resources in the economy. Other measures include: the long-term unemployment rate; the underemployment rate; the labour force underutilisation rate; the extended labour force underutilisation rate; and the volume labour force underutilisation rate.

An understanding of how the Australian labour market has changed over the past few decades, and how this has impacted on changes observed in the progress indicators, is useful in understanding whether life in Australia is getting better. This information is presented in the section 'A picture of the Australian labour market'.

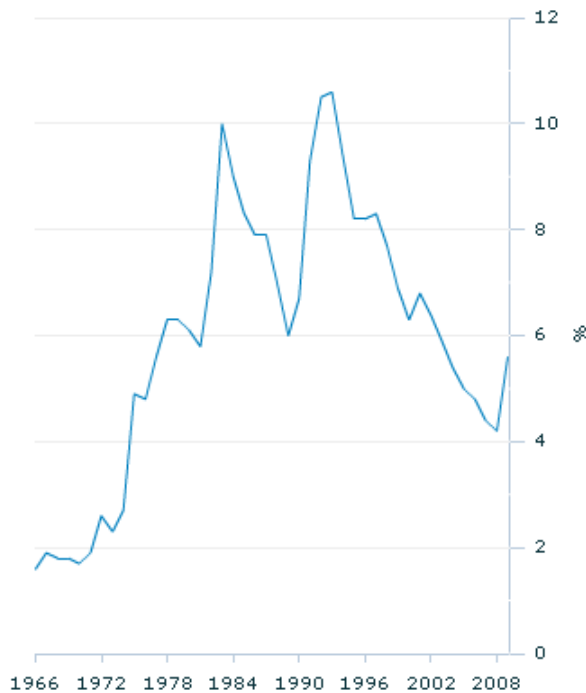
For a full list of definitions, see the Work glossary.

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Unemployment rate(a)



Footnote(s): (a) From 1978: annual average of monthly data. Prior to 1978: annual average of quarterly data.

Source(s): ABS Labour Force, Australia (cat. no. 6202.0); ABS Labour Force Historical Timeseries, Australia, 1966 to 1984 (cat. no. 6204.0.55.001)

UNEMPLOYMENT

The unemployment rate has been chosen as the headline indicator for the work dimension of progress because of its relevance to the economic and social aspects of work. The unemployment rate is the most widely used measure of underutilised labour resources in the economy and is sensitive to changes in economic conditions. Generally, in recent decades, the unemployment rate has tended to rise quickly during economic downturns and fall slowly during periods of economic recovery.

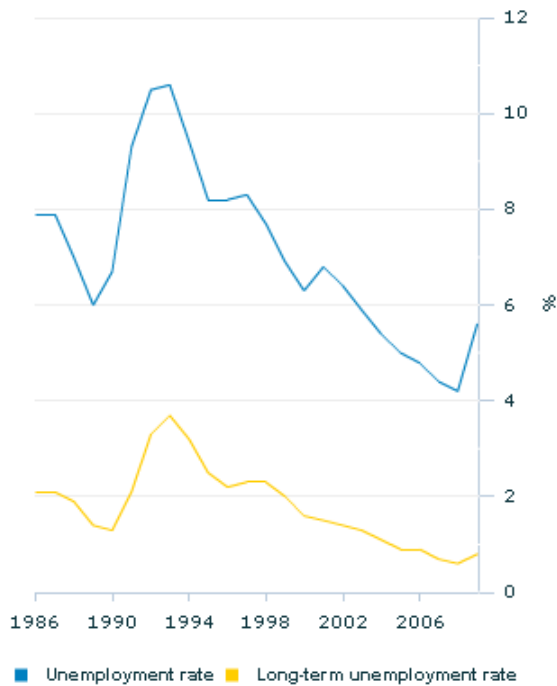
The unemployment rate has fluctuated considerably in the four decades since 1969 when it averaged just under 2%, to rise to 10% by 1983. After another peak in 1993 (10.6%), the unemployment rate steadily declined to 4.2% in 2008, reflecting strong economic growth in Australia. It then rose to 5.6% in 2009 in the wake of the recent global financial crisis.

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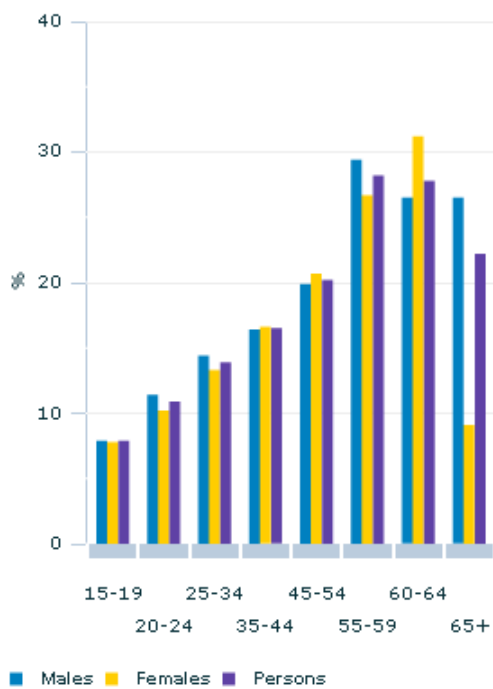
Unemployment and long-term unemployment(a)



Footnote(s): (a) Annual average.

Source(s): ABS Labour Force, Australia, Detailed - Electronic Delivery (cat. no. 6291.0.55.001)

Long-term unemployed as a proportion of all unemployed - 2009(a)



Footnote(s): (a) Annual average.

Source(s): ABS Labour Force, Australia, Detailed - Electronic Delivery (cat. no. 6291.0.55.001)

LONG-TERM UNEMPLOYMENT

People who are unemployed for long periods (for a year or more) may experience greater economic hardship than those who are unemployed for short periods. In addition, they may have more difficulties in finding employment because of the loss of relevant skills and because of employers' perceptions of their 'employability'.

In 2009, the annual average long-term unemployment rate was 0.8%, compared with 2.0% a decade ago. The long-term unemployment rate peaked at 3.7% in 1993, following the economic downturn of the early 1990s and has generally declined since then. More recently, though, the long-term unemployment rate increased slightly from 0.6% in 2008 to 0.8% in 2009.

In 2009, the number of long-term unemployed people averaged 94,000, and over half (57%) of these were men. This is an increase of 23,000 long-term unemployed people compared with 2008.

The risk of being unemployed for long periods tends to increase with age. In 2009, 8% of unemployed people aged 15-19 years were long-term unemployed, compared to 28% of those aged 55-59 or 60-64 years. This may partly reflect the higher prevalence of casual and short-term employment among young people, leading to more frequent but transitory periods of unemployment. In contrast, older people may cite employer attitudes as one of the reasons they are not able to find work (ABS 2004a).

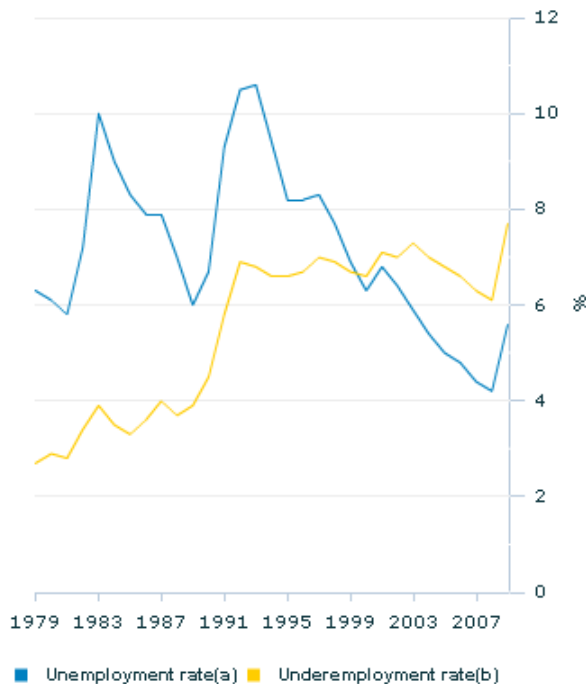
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Unemployment and underemployment



Footnote(s): (a) Annual average of monthly data. (b) Annual average of quarterly data.

Source(s): ABS Labour Force, Australia (cat. no. 6202.0)

UNDEREMPLOYMENT

Lack of paid work can have a significant impact on the financial, personal and social lives of both individuals and their families. While there are some people who are entirely without work (the unemployed) there is also a growing number of people who are in work but who are underemployed.

Most of the underemployed are part-time workers who would like to work more hours, but this group also includes full-time workers who could not work their full-time hours for economic reasons. Over the last three decades the proportion of employed people working part time has risen from 16% to 29%, while over the same period the underemployment rate rose from 2.7% in 1979 to a high of 7.7% in 2009. Since 2000, there have been more underemployed people in Australia than unemployed.

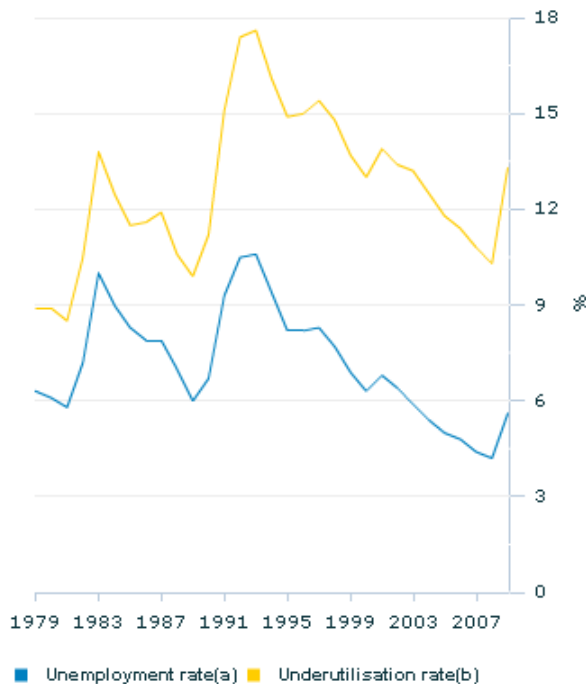
The underemployment rate does not exhibit the same pattern as the unemployment rate during changing economic conditions. While both rates rise during economic slowdowns, the underemployment rate does not tend to fall during periods of strong economic growth. For example, the underemployment rate rose 2.9 percentage points between 1989 and 1993, while the unemployment rate rose 4.7 percentage points. However, while unemployment fell 6.4 percentage points during the period of largely uninterrupted economic growth from 1993 to 2008, the underemployment rate fell by just 0.8 percentage points.

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Unemployment and underutilisation



Footnote(s): (a) Annual average of monthly data. (b) Annual average of quarterly data.

Source(s): ABS Labour Force, Australia (cat. no. 6202.0)

UNDERUTILISATION

Labour underutilisation (that is, unemployment and underemployment) has a significant effect on the people who experience it, on their families, the community and also on the economy. From a social viewpoint, there is concern that people whose aspirations for work are not being realised may suffer in a number of ways - personally, financially and socially. From an economic perspective, there is interest in the amount of spare capacity in the labour force for the future labour supply and its potential to contribute to the production of goods and services. The labour force underutilisation rate provides a more comprehensive view of underutilised labour in the labour force than the unemployment rate or the underemployment rate can do alone.

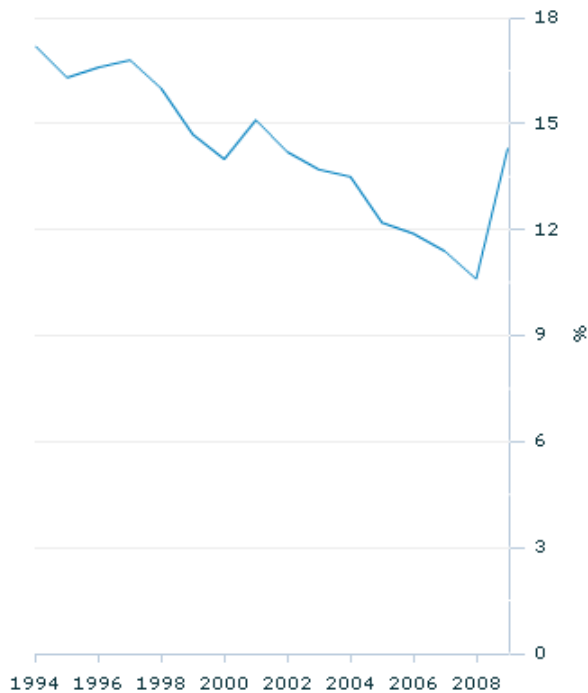
The labour force underutilisation rate rose from 8.9% in 1979 to 13.8% by 1983. After a peak in 1993 (17.6%), the labour force underutilisation rate declined steadily to 10.3% in 2008, reflecting the period of strong economic growth in Australia. It then rose three percentage points, to 13.3%, in 2009 following the recent global financial crisis.

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Extended labour force underutilisation rate(a)



Footnote(s): (a) August.

Source(s): ABS Australian Labour Market Statistics (cat. no. 6105.0)

EXTENDED UNDERUTILISATION

While the underutilisation rate reflects the number of people in the labour force who are not being (fully) utilised, in addition there are some people outside the labour force who could be considered part of the potential labour supply.

The extended labour force underutilisation rate is the broadest measure of underutilised labour and is a measure that includes the unemployed, the underemployed, discouraged jobseekers, and a group of people who are actively looking for work, who are unavailable to start work in the reference week, but who are available to start work within four weeks.

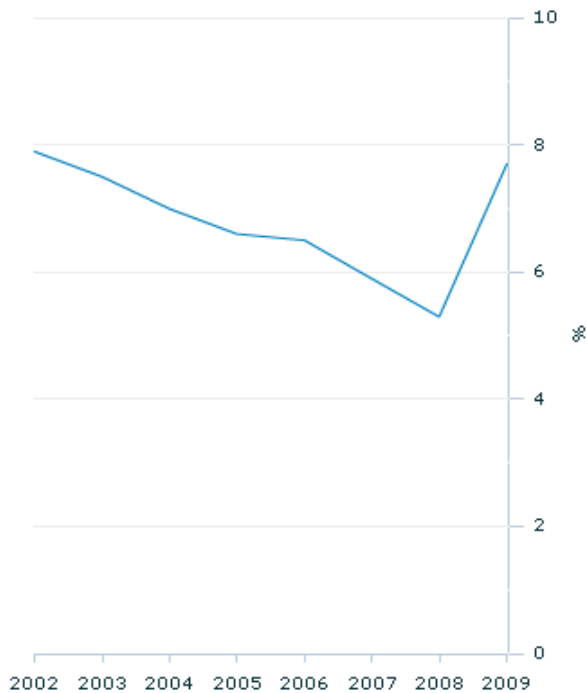
The extended labour force underutilisation rate generally declined between August 1994 and 2008 (from 17.2% to 10.6%), before rising to 14.3% in 2009.

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Volume labour force underutilisation rate(a)



Footnote(s): (a) August.

Source(s): ABS Australian Labour Market Statistics (cat. no. 6105.0)

VOLUME UNDERUTILISATION

Labour underutilisation can be measured in a number of ways - in either population or hours based estimates. The population based, or headcount measures, give an indication of the proportion of the population affected by labour underutilisation. The hours based, or volume measures, quantify the hours of available labour that are unutilised, and may be more relevant in analysing the spare capacity of the labour force.

Whether people are unemployed or underemployed, not all people in search of work (or more work) require the same number of hours of work. For example, consider two underemployed workers. One works 15 hours a week but would prefer to work 35 hours, while the other works 25 hours a week but would prefer to work 30. Both would be counted as underemployed and contribute equally to the headcount underutilisation rate. However, the fact that one is willing to work an additional 20 hours per week and the other only an additional 5 hours would be reflected in the volume labour force underutilisation rate.

The volume labour force underutilisation rate declined from 7.9% in 2002 to 5.3% in 2008 before rising to 7.7% in 2009.

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A PICTURE OF THE AUSTRALIAN LABOUR MARKET

Over recent decades significant economic and social changes have altered the way in which work is organised and carried out in Australia. Examples of major changes include:

- an increase in labour force participation
- labour market deregulation
- the rapid growth of part-time employment
- an increase in casual employment
- changes in the hours worked by Australians
- trading hours liberalisation, and
- anti-discrimination legislation.

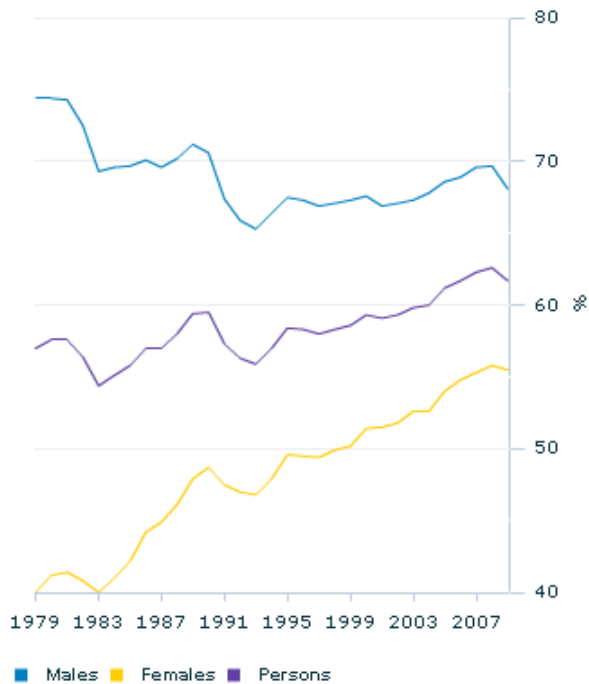
The following section includes further information on how Australia's labour market has changed over time. More specifically, it includes information on: the proportion of the population in work, labour force participation, part-time employment, casual employment, hours worked, and earnings.

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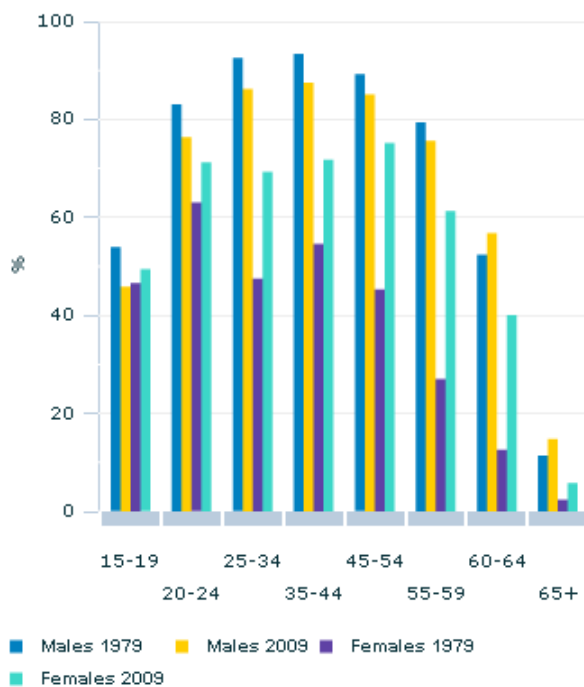
Employment to population ratio(a)(b)



Footnote(s): (a) Annual average. (b) Proportion of civilian population aged 15 years and over.

Source(s): ABS Labour Force, Australia (cat. no. 6202.0)

Employment to population ratio(a)(b) - by age



Footnote(s): (a) Annual average. (b) Proportion of civilian population.

Source(s): ABS Labour Force, Australia, Detailed - Electronic Delivery (cat. no. 6291.0.55.001)

WORKING POPULATION

While the headline and supplementary progress indicators for work focus on the underutilisation of labour, any assessment of progress also needs to consider changes in the proportion and the number of people who are actually in work.

The proportion of people (aged 15 years and over) who were working increased from 57% in 1979 to 62% in 2009, from 6.1 million people in 1979 to 10.8 million in 2009. During this period there were major changes to the industry and workforce structure, with employment growth largely concentrated in the service sector (ABS 2003).

A highly significant change over the last thirty years is the increase in the proportion of women in paid employment, increasing from 40% of women in 1979 to well over half (55%) in 2009. This reflects a change in attitude towards the traditional role of women, as well as the impact of economic deregulation which has resulted in increased opportunities for women in the labour market. Much of the growth in female employment has been in part-time and casual jobs.

Over the same period the proportion of men who are working decreased from 74% to 68%. Despite this decrease, in 2009 there was still a large gap between the proportion of women who were working compared with men (55% of women compared with 68% of men).

The increase in the proportion of women in employment between 1979 and 2009 was evident for all age groups, but was more notable in the older age groups. In 1979, the peak age group for employment among women was 20-24 years (63%). However in 2009, the peak age group was 45-54 years (75%). For men, the peak age group for employment was 35-44 years in both 1979 (93%) and 2009 (88%).

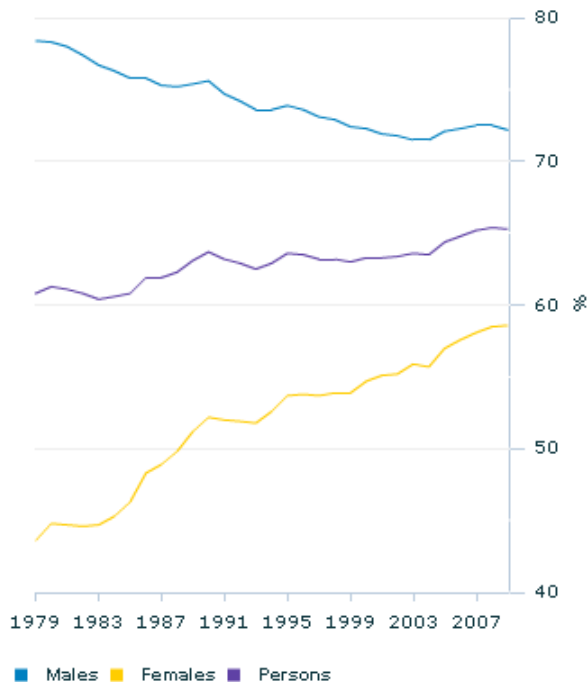
Despite an overall decrease in the proportion of men in employment, this was not evident for older men. For men aged 60-64 years, the proportion working increased from 52% to 57%, and for men aged 65 years and over from 11% to 15%.

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Labour force participation rate(a)



Footnote(s): (a) Annual average.

Source(s): ABS Labour Force, Australia, Detailed - Electronic Delivery (cat. no. 6291.0.55.001)

LABOUR FORCE PARTICIPATION

Increasing the Australian working-age population, lifting labour force participation rates, and raising productivity have been identified by the Australian Treasury as critical in addressing the economic challenges posed by an ageing population (Australian Treasury 2010). While there is an economic incentive to lift labour force participation rates, there are also benefits to the individual. Labour force participation can lead to greater individual wellbeing in terms of financial security, self-esteem and social engagement.

The labour force is simply the number of people who are either employed or unemployed (i.e. looking for and available for work). In 2009, there were, on average, 10.8 million employed people and 638,400 unemployed people. Since the majority of the labour force is made up of employed people (94% in 2009), it holds that changes observed in the proportion of people working (such as the large increase in the proportion of women who are working) are reflected in changes in the labour force participation rate.

Over the last three decades the labour force participation rate of people aged 15 years and over increased from 61% in 1979 to 65% in 2009. For the so-called working age population (people aged 15-64 years) it increased from 69% to 76% between 1979 and 2009.

The increase in labour force participation has been driven by a large increase in the participation of women, from 44% in 1979 to 59% in 2009. In contrast, the participation rate for men decreased from 78% in 1979 to 72% in 2009.

In 2009, about one-third of the population (aged 15 years and over) were not in the labour force, and there are a number of reasons for this. For some people it is because of parental or caring responsibilities. For others it is because they are studying, for their own personal health reasons or because they are retired. However, others may wish to work, but lack affordable (or appropriate) child care. For others, the jobs that are available are unsuitable as they do not have the flexibility to work around their other commitments

(such as study or caring). In addition, some people who want to work are discouraged from applying for jobs if there are no suitable jobs that utilise their skills or qualifications available locally, or because they feel that employers see them as too old or too young.

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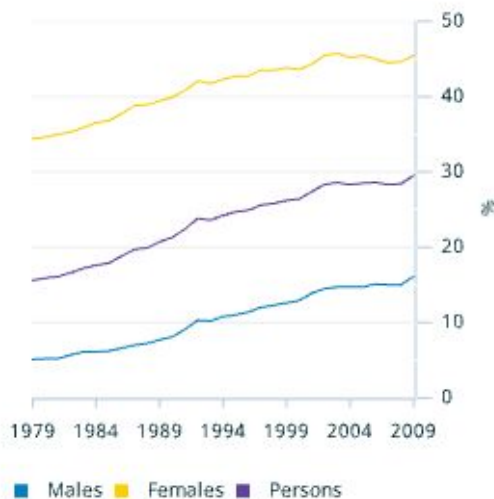
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People working part-time(a)(b)

People working part-time(a)(b)



Footnote(s): (a) Annual average. (b) Proportion of all employed people aged 15 years and over.

Source(s): [ABS Labour Force, Australia \(cat. no. 6202.0\)](#)

Footnote(s): (a) Annual average. (b) Proportion of all employed people aged 15 years and over.

Source(s): ABS Labour Force, Australia (cat. no. 6202.0)

PART-TIME EMPLOYMENT

Over recent decades, there has been a gradual, long-term trend away from 'standard' full-time jobs to part-time work. The proportion of employed people who worked part time increased from 16% in 1979 to 29% in 2009.

While part-time work tends to be more prevalent among women, its increase over the past 30 years has been evident for both men and women. The proportion of employed women working part time increased from 34% in 1979 to 45% in 2009, compared to 5% and 16%, respectively, for men.

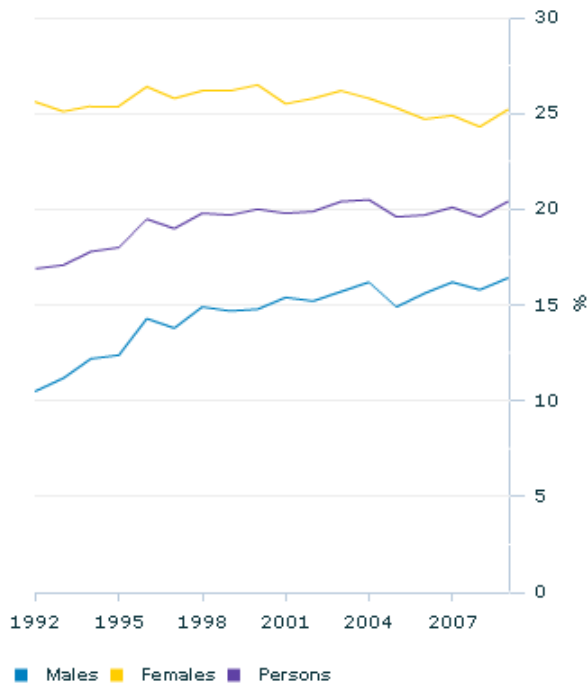
The increased availability of part-time work has expanded opportunities for people to balance work with family responsibilities, to participate in education, or to make the transition to retirement. The majority of people who work part time do not want to work more hours, or would not be available to work more hours even if the extra hours were available. In 2009, a quarter (25%) of all part-time workers were underemployed.

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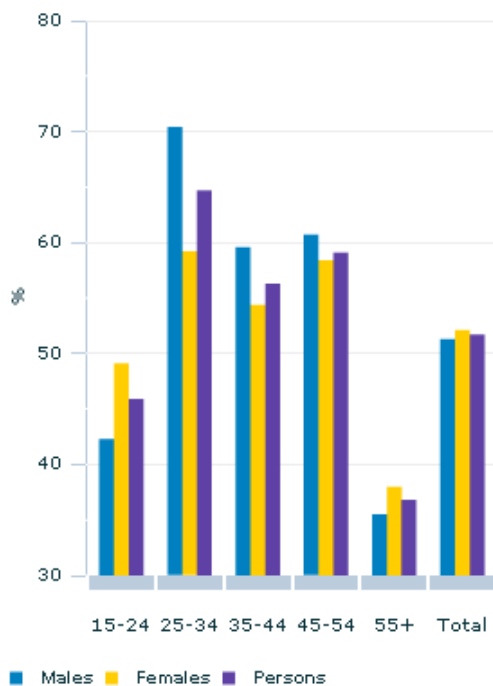
Casual employees(a)(b)



Footnote(s): (a) Employees (excluding owner managers of incorporated enterprises) without leave entitlements as a proportion of all employed persons. (b) Data for August each year to 2007, and for November each year from 2008. See the Work datacube for more information.

Source(s): ABS Australian Labour Market Statistics (cat. no. 6105.0)

Casual employees(a) who would prefer to have leave entitlements(b)(c) - 2007



Footnote(s): (a) Employees (excluding owner managers of incorporated enterprises) without paid leave

entitlements. (b) Paid sick leave or paid holiday leave or both. (c) Taking into account effect on income.

Source(s): ABS data available on request, ABS 2007 Survey of Employment Arrangements, Retirement and Superannuation.

CASUAL EMPLOYEES

Casual employees are those who are not entitled to paid holiday or sick leave but who receive a higher rate of pay to compensate for this. While many casual employees value the flexibility of arrangements which enable them to balance work with family, study or other non-work activities, others may find themselves in less than favourable employment arrangements.

The proportion of casual employees has grown slowly over the last two decades (from 17% in 1992 to 20% in 2009). There is a strong relationship between casual employment and part-time employment. In 2009, 72% of all casual employees worked part-time hours. The proportion of employed men who are casual employees increased from 11% in 1992 to 16% in 2009, while for women the proportion remained stable at about 25%.

In 2007, about half (52%) of all casual employees reported that they would prefer not to work on a casual basis even taking into account the effect this may have on their income. Most of these would prefer to have both paid holiday leave and sick leave, while a small proportion would prefer to have one or the other. However, these preferences varied by age. People aged 25-34 years were most likely to prefer paid leave entitlements over a higher rate of pay (65%), with 70% of men and 59% of women in that age group preferring paid leave entitlements. This may be because they were of an age where they would be more likely to be raising young children, and may require regular sick or carer's leave for themselves and their children.

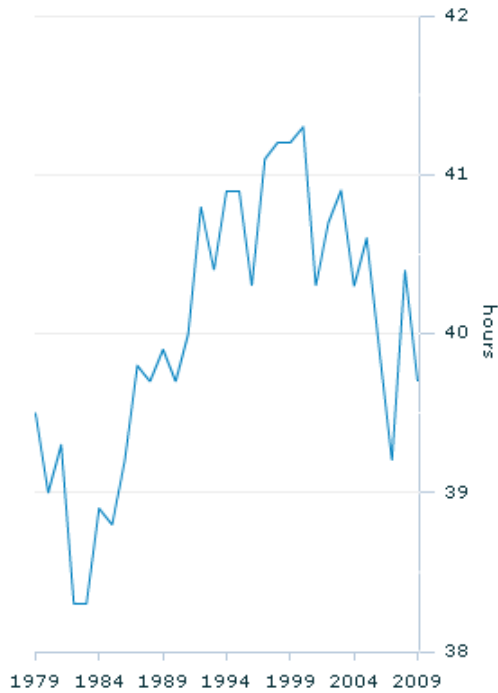
Older people (aged 55 years or more) (37%) and younger people (aged 15-24 years) (46%) were the least likely to prefer paid leave entitlements over a higher rate of pay.

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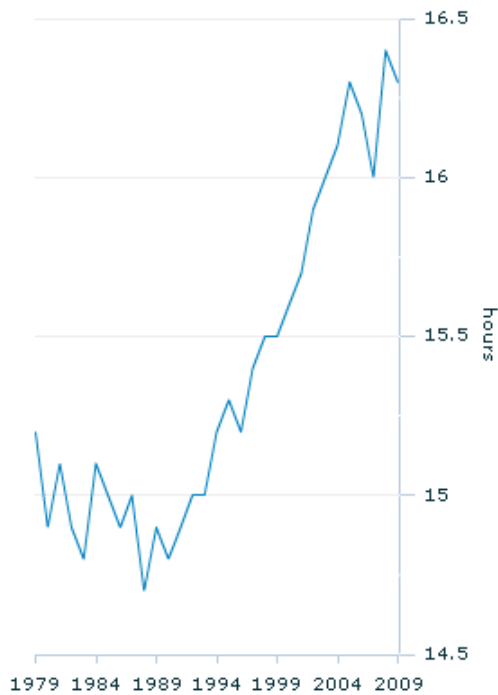
Average weekly hours worked(a) - full-time workers



Footnote(s): (a) Annual average.

Source(s): ABS Labour Force, Australia, Detailed - Electronic Delivery (cat. no. 6291.0.55.001)

Average weekly hours worked(a) - part-time workers



Footnote(s): (a) Annual average.

Source(s): ABS Labour Force, Australia, Detailed - Electronic Delivery (cat. no. 6291.0.55.001)

HOURS WORKED

The number of hours that a person works can determine their level of remuneration and the time they have available to spend on things outside work, such as family, study or recreational activities.

The average number of hours worked per week has decreased over the last three decades, falling from 35.7 hours per week in 1979 to 32.8 hours per week in 2009, largely due to an increase in the proportion of people working part time. The average hours worked by full-time workers rose during the 1990s, peaking at 41.3 hours per week in 2000, but decreasing to 39.7 hours per week in 2009.

The average number of hours worked per week by part-time workers increased slightly over time, from around 15 hours in the 1980s to approximately 16 hours from 2000 onwards.

Working long hours

While working longer hours may be financially rewarding, particularly for people working in their own businesses for a share of profit, not all people who are working long hours wish to do so, and not all are paid for the excess work time. Excessive working hours can be detrimental to productivity and to wellbeing through stress and a lack of work/life balance.

The proportion of employed people who worked 50 hours or more a week increased from 14% in 1979 to 19% in 1999, before falling to 15% in 2009 during the recent economic downturn. The proportion of employed people who worked very long hours (60 hours or more a week) increased from 7% in 1979 to 9% in 1992, where it stayed until 2000 before declining to 7% in 2009.

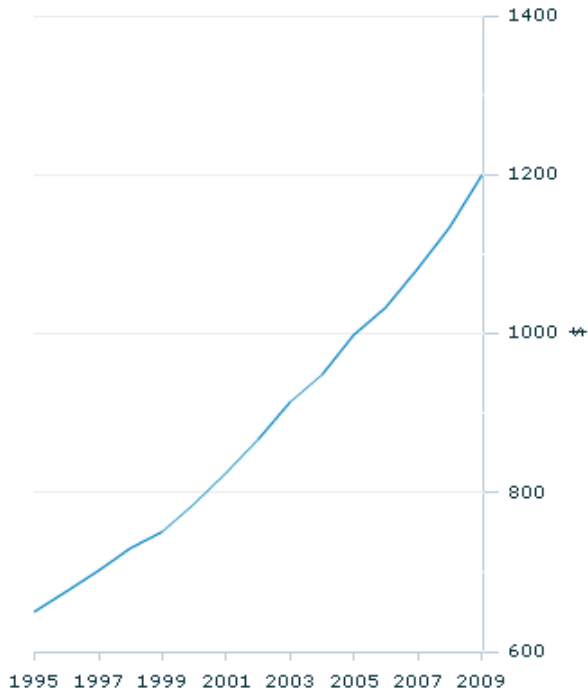
Owner managers (people working in their own business) who work full-time hours (35 hours or more a week) tend to work more hours per week than those who are employees. Full-time owner managers worked on average 49 hours per week in November 2009, compared to an average 40 hours per week for employees (excluding owner managers of incorporated enterprises) (ABS 2010b).

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Full-time adult ordinary time earnings(a)



Footnote(s): (a) Annual average.

Source(s): ABS Average Weekly Earnings, Australia (cat. no. 6302.0)

EARNINGS

Earnings from paid work determine most Australians' capacity to buy goods and services for consumption, and are a key determinant of material living standards.

Full-time adult ordinary time earnings is a widely used measure of earnings. It is unaffected by fluctuations in the hours of part-time work or overtime performed. Full-time adult ordinary time earnings grew at an average rate of 4.8% per year over the last decade from \$750 per week in 1999 to \$1,199 in 2009.

Not all of this increase has resulted in improved spending power for Australian employees, as inflation has increased the prices of goods and services. The Consumer Price Index has remained at about 3% per year since 2001-02. For further information see the Inflation section.

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PROGRESS OF AUSTRALIANS

Over recent decades, significant economic and social changes have altered the way in which work is organised and carried out. There have also been changes in the composition of the workforce, and in the way in which pay and other employment conditions are set.

The impact of these changes has not been uniform across the various subgroups within the population. Among groups of interest are those at both the younger and older ends of the age spectrum, lone parents, people with disabilities, carers, Aboriginal and Torres Strait Islander peoples, and people living in remote regions of Australia.

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YOUNGER PEOPLE

For younger Australians (those aged 15-24 years) participation in the labour force tends to increase with age, reflecting their transition from education and training (which is often combined with part-time work) into full-time employment. Levels of labour force participation and unemployment are frequently used as indicators of the wellbeing of young people. Indeed, the relatively high level of youth unemployment is often cited as a cause for concern (16.5% for 15-19 year olds in 2009, and 8.2% for 20-24 year olds).

However, young people's engagement in education and training is generally viewed as a more meaningful indicator of wellbeing than unemployment or labour force participation alone (FYA 2009). Research suggests that young people who are not fully engaged in education or work (or a combination of both) are at greater long term risk of unemployment, cycles of low pay and employment insecurity (Pech 2009). Furthermore, participation in education and training and engaging in work are considered important aspects in developing individual capability and in building a socially inclusive society (DEEWR 2009). Young people are considered to be fully engaged if they are participating in full-time work, full-time education or a combination of part-time work and part-time study.

The majority of young Australians are fully engaged. In both 1999 and 2009, the proportion who were fully engaged was 81%. In May 2009, 85% of 15-19 year olds were fully engaged, compared with 78% of 20-24 year olds.

The most notable change over the decade for 20-24 year olds has been an increase in the proportion who were studying full time, from 21% in 1999 to 29% in 2009. This coincides with a decline in the proportion working full-time (from 52% to 47%) and is consistent with increases in both the completion of secondary school and the undertaking of further post-school education.

In May 2009, some 561,000 young people were not fully engaged. This 19% was made up of

- 10% who were neither employed nor enrolled in any study
- 8% who worked part time (without being enrolled to study)
- 1% were enrolled in part-time study only

There are a number of reasons why young people may not be fully engaged. They may be looking for work following the completion of their studies, they may be taking time out for travel, they may be caring for a child or relative, or they may be experiencing personal illness or disability (Pech 2009). Among those who are not fully engaged, young men are more likely to be unemployed than young women, while young women were more likely to be not in the labour force. This is in large a reflection of women's greater likelihood of being a principal carer of young children (ABS 2010a).

Fully engaged in education and work

	May 1999			May 2009		
	15-19 years %	20-24 years %	15-24 years %	15-19 years %	20-24 years %	15-24 years %
Fully engaged(a)	86.9	74.9	80.9	84.5	77.8	81.0
Full-time work	16.4	52.2	34.3	14.7	47.4	31.4
Full-time study(b)	70.2	21.2	45.6	69.3	29.2	48.8
Part-time work; Part-time study(b)	0.9	2.2	1.6	1.0	2.3	1.7
Not fully engaged	13.1	25.1	19.1	15.5	22.2	19.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Total ('000)	1 321.0	1 327.4	2 648.4	1 445.2	1 512.7	2 957.9

(a) Components do not add to total as a small number of people are in both full-time work and full-time study.

(b) Refers to all study.

Source: ABS data available on request, ABS Survey of Education and Work.

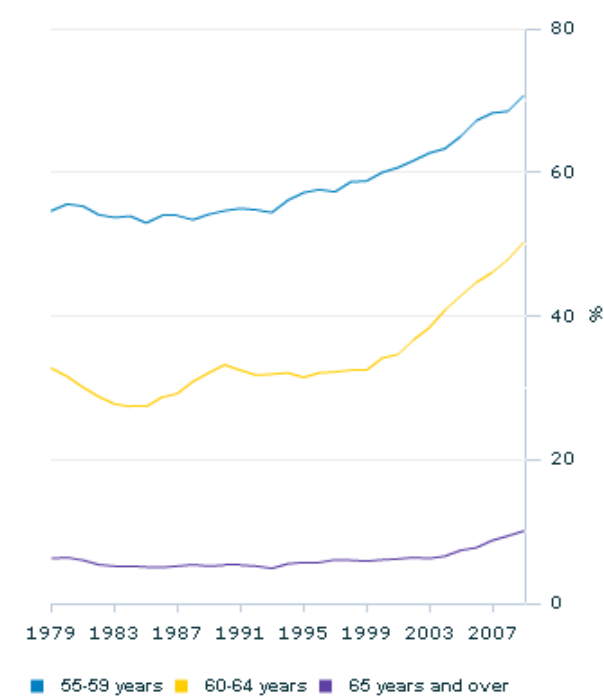
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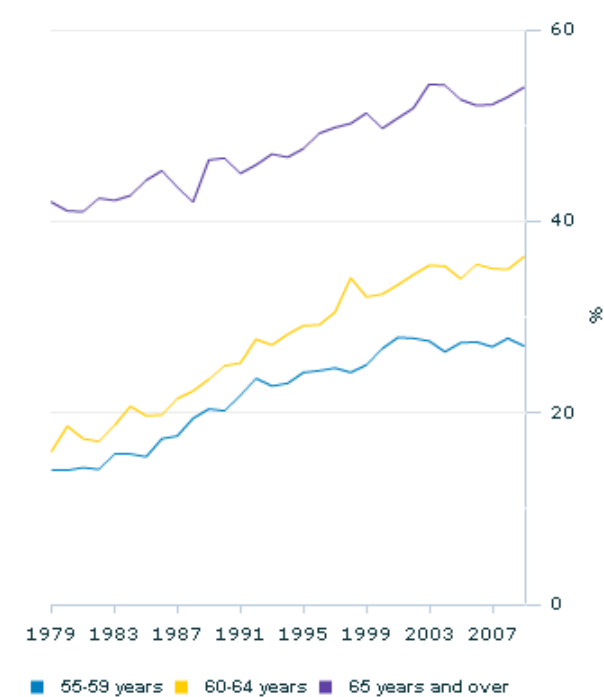
Participation rate of older people(a)



Footnote(s): (a) Annual average.

Source(s): ABS Labour Force, Australia, Detailed - Electronic Delivery (cat. no. 6291.0.55.001)

Older people working part-time(a)(b)



Footnote(s): (a) Annual average. (b)

Proportion of all employed people in each age group.

Source(s): ABS Labour Force, Australia, Detailed - Electronic Delivery (cat. no. 6291.0.55.001)

OLDER PEOPLE

The extent of involvement in the paid workforce varies throughout the life course, but generally declines towards the years of retirement. There are a range of factors that influence whether and when people retire from the labour force. Financial considerations such as the adequacy of superannuation and eligibility for the age pension are important factors for many people. For others, ill health or disability, or caring responsibilities mean that they are unable to participate in the labour force even though they would like to. Many cite employer attitudes towards older people as one of the reasons they are not inclined to look for work, or are not able to find work (ABS 2004a). This may be one of the reasons why older people tend to be unemployed for longer than those in younger age groups.

Regardless of age, having paid work contributes to a person's sense of identity and self-esteem, and provides opportunities for self development and interaction with people outside the home. There are also benefits for businesses, the economy and society in keeping older people in the workforce, given their experience and knowledge.

The labour force participation rate of people aged 55 years and over has risen over the last three decades. Participation among people aged 55-59 years rose from 55% in 1979 to 71% in 2009. For those aged 60-64 years, participation rose from 33% in 1979 to 50% in 2009, and for people aged 65 years and over it rose from 6% to 10% over the same period.

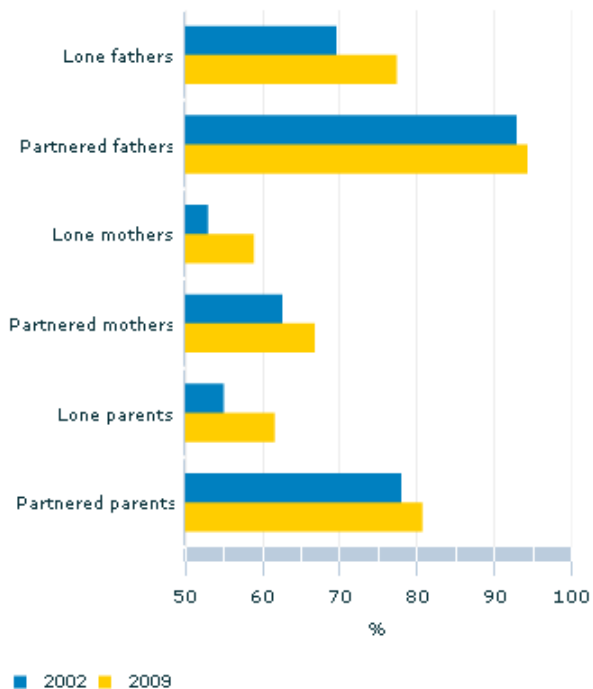
Recent decades have also seen an increasing trend of people moving from full-time to part-time work as a transition to retirement. For people aged 60-64 years, the proportion of workers in part-time employment increased from 16% in 1979 to 36% in 2009. For people aged 65 years and over, it rose from 42% to 54% over the same period.

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Participation rates(a)(b)



Footnote(s): (a) Annual average. (b) Of parents with children under 15 years.

Source(s): ABS Labour Force, Australia, Detailed - Electronic Delivery (cat. no. 6291.0.55.001)

LONE PARENTS

Lone parents are less likely to be employed than parents in other types of families. Lone parents tend to have lower levels of labour force participation and are more likely to work part time than partnered parents. Among lone parents, fathers are more likely to participate in the labour force, and are more likely to work full time than mothers. However, most one parent families are headed by mothers (86% of one parent families with children under 15 years in 2009).

Between 2002 and 2009, the proportion of lone parents (with children under 15 years) who were in the labour force increased from 55% to 62%. This increase has slightly narrowed the gap between lone and partnered parents, as the participation rate among lone parents increased more than that of partnered parents with children under 15 years (increases of 7 and 3 percentage points respectively). The participation rate among partnered mothers with children under 15 years increased more slowly (from 63% to 67%) than that of lone mothers (from 53% to 59%), while that of partnered fathers remained stable at about 94% compared to that of lone fathers, which increased from 70% to 77%.

The participation rate among lone mothers and fathers tends to increase with the age of their youngest child. This is also the case for partnered mothers, but not for partnered fathers whose participation does not vary with the age of the youngest child (ABS 2007).

The increase in labour force participation among lone mothers (with children under 15 years) between 2002 and 2009 was driven by increases in both full-time and part-time employment. The proportion of lone mothers working part time increased from 27% to 30% between 2002 and 2009, while the proportion working full time increased from 18% to 22%. There was also a rise in employment among partnered

mothers over this period (from 37% to 39% for part-time employment and from 23% to 25% for full-time employment).

Over half of lone fathers with children under 15 years worked full time (55%) in 2009, compared with 85% of partnered fathers. Lone fathers were more likely than partnered fathers to work part time (15% compared with 6%).

Lone parents are more likely to be unemployed than partnered parents, but the gap closed slightly between 2002 and 2009. The proportion of partnered parents who were unemployed remained the same between 2002 and 2009 (at about 3%), while the proportion of lone parents who were unemployed decreased slightly (from 8% to 7%). Lone fathers were more likely to be unemployed than partnered fathers (7% compared with 3%)

For more information about children without an employed parent, see the Family, community and social cohesion section.

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PEOPLE WITH A DISABILITY

People with a disability generally experience lower levels of employment than other Australians. This can affect their self-esteem, their level of engagement with the wider community and can have a financial impact on individuals and their families.

In 2003, there were 4 million Australians with a disability, accounting for 20% of the total population. The rate of disability within the population was similar for men and women.

Among Australians aged 15-64 years in 2003, those with a disability had a lower labour force participation rate (53%), and a higher unemployment rate (8.6%) than other Australians of the same age (81% and 5.0%, respectively). Women with a disability were less likely to participate in the labour force (47%) than men (59%).

Overall, the participation rate of people with a disability remained steady from 1998 to 2003. However, there was a fall in the participation of people with a severe or profound core activity limitation, and an increase in the participation rate for others with a disability (see the glossary for the definition of severe or profound core activity limitation).

Some people with disabilities experience employment restrictions such as being unable to work, being restricted in the types or hours of work they can do, or needing special assistance in the workplace. People with disabilities who had an employment restriction were far less likely to participate in the labour force (45%) than those without an employment restriction (72%). In 2003, of the 1.5 million people who had a disability and an employment restriction, 39% reported being permanently unable to work.

Participation and unemployment among disability groups(a) - 2003

	Participation rate %	Unemployment rate %
Total persons aged 15-64 years	76.0	5.4
No reported disability	80.6	5.0
All with disability(b)	53.2	8.6
All with disability but with no employment restriction	71.8	4.7
All with specific restrictions or limitations	47.7	9.9
Schooling or employment restriction	44.9	11.5
Employment restriction	45.0	11.3
Core activity limitation(c)	43.0	8.2
Mild	50.6	7.7
Moderate	47.9	7.6
Severe	35.8	9.5
Profound	15.2	*13.9

* estimate has a relative standard error of 25% to 50% and should be used with caution

(a) Limited to persons aged 15-64 years living in households.

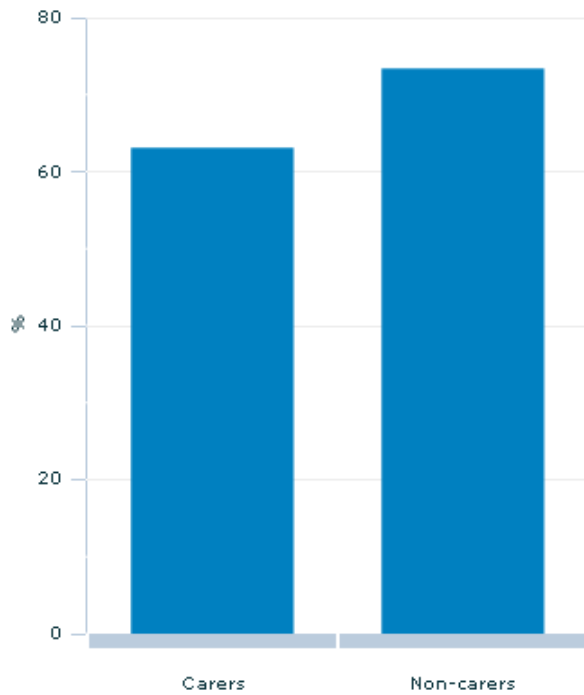
(b) Includes those who do not have a specific limitation or restriction.

(c) Core activities comprise communication, mobility and self care.

Source: ABS Disability, Ageing and Carers: Summary of Findings, Australia, 2003 (cat. no. 4430.0)

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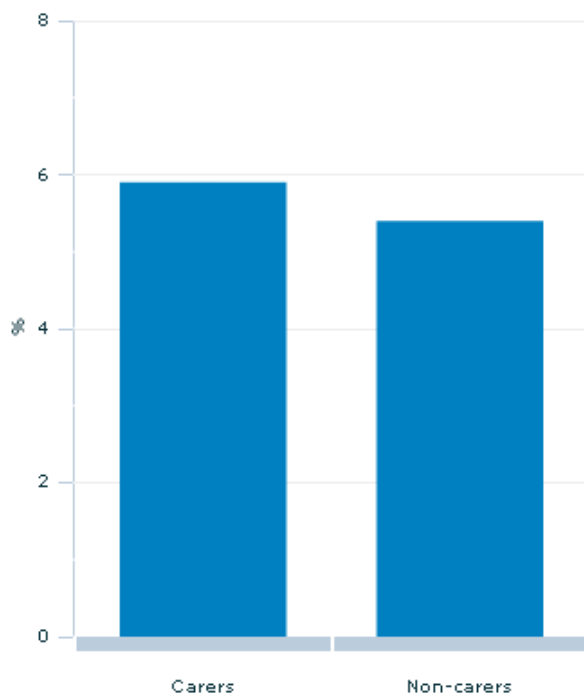
Employment to population ratio(a) - 2003



Footnote(s): (a) Aged 15-64 years.

Source(s): Source: ABS data available on request, Survey of Disability, Ageing and Carers, 2003

Unemployment rate(a) - 2003



Footnote(s): (a) Aged 15-64 years.

Source(s): Source: ABS data available on request, Survey of Disability, Ageing and Carers, 2003

CARERS

People who provide care for those with disabilities, long-term health conditions and those who are frail or aged, perform an important service by enabling these people to live in the community rather than in institutions (see the glossary for the full definition of 'carers'). However, carers may find it difficult to combine their caring role with paid employment. While this may cause some carers to reduce their hours or to leave employment altogether, drawing a causal link between the caring role and labour force status is not straightforward. The low rate of participation among carers may reflect the fact that, in some households, it may have been most convenient for a person already outside the labour force to take up a caring role when needed. In other households carers may have left the workforce due to their caring role (ABS 2009b).

In 2003, there were around 2 million carers (aged 15-64 years) in Australia, accounting for 15% of people in this age group. There were proportionally more women carers than men (17% of women were carers compared with 13% of men), and women were more likely to take on caring roles at a younger age.

Carers were less likely than non-carers to be employed (63% compared with 73%) and in 2003 were less likely than non-carers to be working full time (63% of those employed compared with 71%). The differences in full-time employment between carers and non-carers were evident for both males and females.

The unemployment rate was slightly higher for carers aged 15-64 years (5.9%) than it was for non-carers (5.4%). However, carers were more likely to be outside the labour force than non-carers (33% compared with 22%).

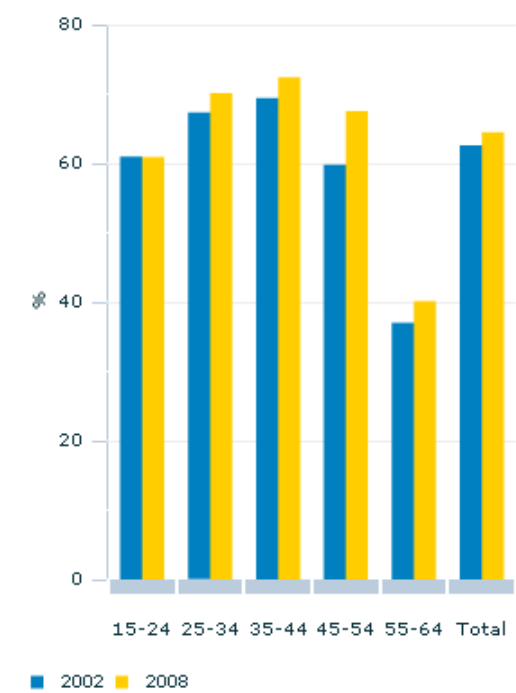
In 2007, the most common reason reported by carers for being outside the labour force was that they were caring for at least one person who was ill, disabled or elderly (39%). This was more common for older carers aged 45-64 years (46%) than for carers aged 15-44 years (29%). Around half (48%) of carers aged 15-44 years said that they were outside the labour force because they were caring for children (for a child with a disability or long-term health condition). Another 30% of carers aged 15-44 years said that they weren't working because of home duties (ABS 2009b).

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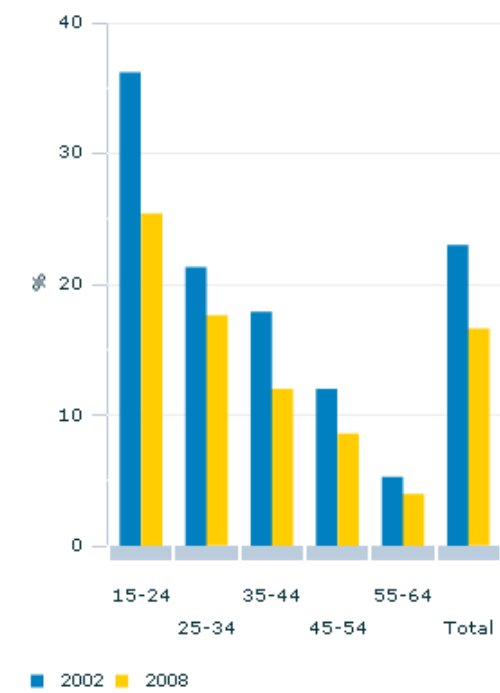
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Aboriginal and Torres Strait Islander labour force participation rate



Source(s): ABS data available on request, National Aboriginal and Torres Strait Islander Social Survey

Aboriginal and Torres Strait Islander unemployment rate(a)



Footnote(s): (a) Estimates for people

aged 55-64 years have a relative standard error of 25% to 50% and should be treated with caution.

Source(s): ABS data available on request, National Aboriginal and Torres Strait Islander Social Survey

ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLES

Aboriginal and Torres Strait Islander Australians continue to have a significantly lower rate of labour force participation, and a significantly higher rate of unemployment than non-Indigenous Australians, despite some gains in this area.

In 2002, 63% of Aboriginal and Torres Strait Islander people (aged 15-64 years) were in the labour force, compared with 79% of the non-Indigenous population in this age group. By 2008, the labour force participation rate for Aboriginal and Torres Strait Islander Australians had increased to 65% while the rate for the non-Indigenous population had remained stable. Increases in participation for Aboriginal and Torres Strait Islander people were apparent in most age groups but the largest increase was for the 45-54 year age group where the rate rose from 60% in 2002 to 68% in 2008. For young Aboriginal and Torres Strait Islander people (aged 15-24 years) the participation rate remained stable (Endnote 1).

In 2002, the unemployment rate for Aboriginal and Torres Strait Islander Australians aged 15-64 years was 23%, almost four times the rate for non-Indigenous Australians (5.8%). By 2008, the unemployment rate for Aboriginal and Torres Strait Islander peoples had fallen to 16.6%, however in spite of this decline, the unemployment rate was about four and a half times that of the rate for non-Indigenous people in 2008 (3.6%). The largest decline in the unemployment rate was for young Aboriginal and Torres Strait Islander Australians aged 15-24 (from 36.2% in 2002 to 25.4% in 2008) a fall of 10.8 percentage points, or 30%. However, the largest proportional decline was for 35-44 year old Aboriginal and Torres Strait Islander people. The rate for this age group declined from 17.9% in 2002 to 12.0% in 2008, a fall of almost 33%.

To some extent the continuing disparities in the employment outcomes of Aboriginal and Torres Strait Islander and non-Indigenous Australians reflect differences in their levels of education. In 2006, only a quarter (24%) of Aboriginal and Torres Strait Islander Australians had non-school qualifications compared with around half (46%) of the non-Indigenous population. However, among those with non-school qualifications, the labour force participation rate of Aboriginal and Torres Strait Islander Australians was comparable with those of the non-Indigenous population (81% compared with 86%) (ABS 2008).

The differences in employment outcomes for Aboriginal and Torres Strait Islander Australians also reflect the fact that Aboriginal and Torres Strait Islander people are more likely to live in remote areas than non-Indigenous Australians, and this may result in limited job opportunities being available. For more information on Aboriginal and Torres Strait Islander participation in education, see the Education and training section.

ENDNOTES

1. For the non-Indigenous population, information was obtained from the 2002 General Social Survey and the 2007-08 National Health Survey.

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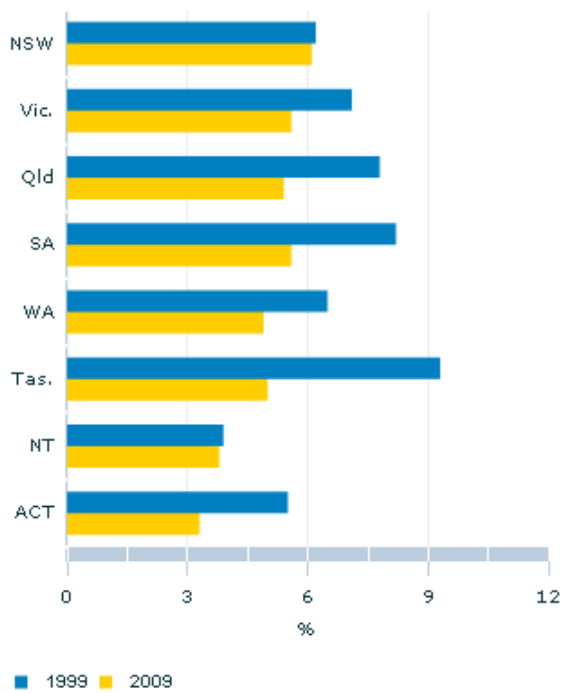
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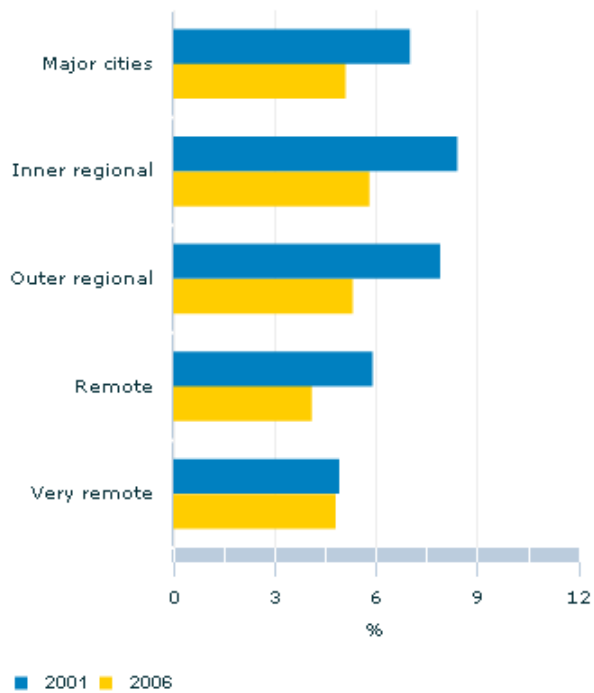
Unemployment rate(a) - states and territories



Footnote(s): (a) Annual average.

Source(s): ABS Labour Force, Australia (cat. no. 6202.0)

Unemployment rate - by remoteness area



Source(s): ABS data available on

request, Australian Census of Population and Housing.

REGIONAL

Employment opportunities vary across different parts of Australia along with the nature and strength of the economic base, the industry profile and the relative growth of industries within the region. Differences in regional employment opportunities may reflect the fact that some areas have been more affected than others by restructuring within the economy, including the move away from traditional manufacturing to service industries. Other factors, including the population's age composition and growth, and the skill base of residents, can influence regional differences in employment (ABS 2001).

In 2009, the lowest unemployment rate was in the ACT (3.3%) followed by the Northern Territory (3.8%), while the highest unemployment rate was in NSW (6.1%). Unemployment fell significantly across most states and territories over the past decade, with the largest fall in Tasmania (from 9.3% to 5.0%). One of the exceptions was NSW, where the unemployment rate between 1999 and 2009 dropped 0.1 percentage points (from 6.2% to 6.1%).

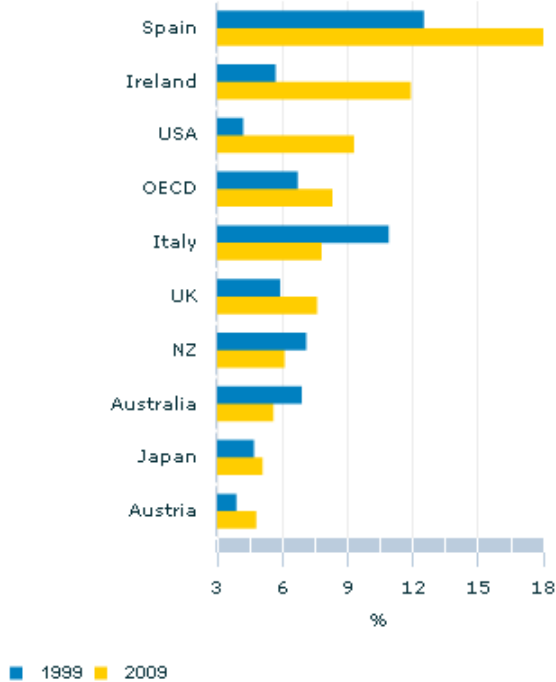
Unemployment also varies depending on the remoteness of the region. While unemployment fell across all remoteness areas over the five years to 2006, the pattern of unemployment across remoteness classification remained similar. People living in remote and very remote parts of Australia had the lowest unemployment rates (4.1% and 4.8%, respectively, in 2006), while those living in inner regional Australia had the highest (5.9% in 2006).

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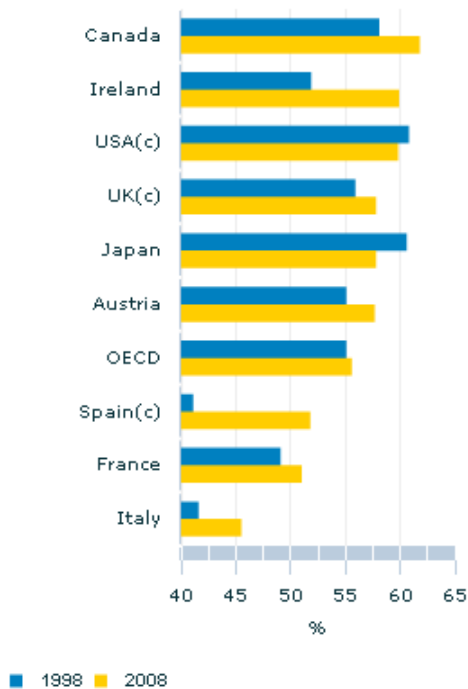
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Unemployment rate - OECD countries



Source(s): OECD Labour Force Datasets (MEI)

Employment(a) to population(b) ratio - OECD countries



Footnote(s): (a) Civilian employment.
 (b) Aged 15 years and over except where otherwise noted. (c) Aged 16

years and over.

Source(s): OECD Labour Force
Statistics 1988-2008

INTERNATIONAL COMPARISONS

In 2009, the global financial crisis had a significant impact on the economic circumstances of OECD countries. The OECD average unemployment rate was 8.3% in 2009, compared with 6.7% in 1999. Australia, Italy, France and New Zealand experienced a reduction in their annual unemployment rates between 1999 and 2009. Most of the remaining OECD countries experienced increases in their unemployment rates over the decade, with Ireland and the USA experiencing a doubling of their unemployment rates. In 2009, Australia's unemployment rate was 5.6% compared to 18.0% for Spain, 9.3% for the USA and 7.6% for the UK. Austria and Japan had lower unemployment rates than Australia of 4.8% and 5.1% respectively.

Australia's employment to population ratio increased from 58% in 1998 to 62% in 2008. Spain and Ireland experienced some of the largest increases in the proportion of the population who were working over the last 10 years (11% and 8% increase respectively). Italy's employment to population ratio remained low, at 42% in 1998, rising to 46% in 2008. Japan and the USA, whose employment to population ratio was high in 1998, both experienced declines over the last 10 years (of 3 and 1 percentage points, respectively), going against the OECD average, which showed an increase of about 0.5 of a percentage point.

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LINKS TO OTHER DIMENSIONS OF PROGRESS

Work, and the economic and social benefits that flow from it, are important to the wellbeing of individuals, the broader community and the economy. The underutilisation of labour resources is a lost opportunity for producing goods and services, while income support and other services provided to assist those who are unemployed use government funds which could be used in other ways.

There are links between work, or a lack of work, and other aspects of progress. For example, studies generally suggest that unemployment is associated with crime, with poorer health, and with higher risks of financial hardship and lower levels of social cohesion. These associations tend to be stronger for those who are unemployed for longer periods of time. Reducing levels of unemployment may help to reduce the extent of these associated problems.

Improvement in the skill or quality of the work undertaken by people affects Australia's productivity, while unemployment is influenced by changes in the economic cycle. The level of education is strongly linked to gaining employment and, in particular, to higher paid jobs and higher skilled occupations.

See also the sections linked below.

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- [National income](#)
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- [Productivity](#)
- [Household economic wellbeing](#)
- [Health](#)
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WORK GLOSSARY

Active steps to find work

Includes writing, telephoning or applying in person to an employer for work; answering an advertisement for a job; checking factory noticeboards or the touchscreens at Centrelink offices; being registered with Centrelink as a jobseeker; checking or registering with any other employment agency; advertising or tendering for work; and contacting friends or relatives.

Actual hours worked

The hours actually worked during the reference week, not necessarily hours paid for.

Adult employees

Adult employees are those employees 21 years of age or over and those employees who, although under 21 years of age, are paid at the full adult rate for their occupation. See 'Full-time adult ordinary time earnings'.

Attending full-time education

Persons aged 15-24 years who were enrolled full time at secondary school, high school, Technical and Further Education (TAFE) college, university, or other educational institution in the reference week.

Average weekly hours worked

Aggregate hours worked by a group divided by the number of persons in that group. Aggregate hours refers to the total number of hours a group of employed persons has actually worked during the reference week, not necessarily hours paid for.

Carers

A person of any age who provides any informal assistance, in terms of help or supervision, to persons with disabilities or long-term conditions, or older persons (i.e. aged 60 years and over). This assistance has to be ongoing, or likely to be ongoing, for at least six months. Assistance to a person in a different household relates to 'everyday types of activities', without specific information on the activities. Where the care recipient lives in the same household, the assistance is for one or more of the following activities:

- cognition or emotion
- communication
- health care
- housework
- meal preparation
- mobility
- paperwork
- property maintenance
- self care
- transport.

Casual employees

Employees (excluding owner managers of incorporated enterprises) who are not entitled to both paid holiday and paid sick leave in their main job.

Civilian population aged 15 years and over

All usual residents of Australia aged 15 years and over except members of the permanent defence forces, certain diplomatic personnel of overseas governments customarily excluded from census and estimated population counts, overseas residents in Australia, and members of non-Australian defence forces (and their dependants) stationed in Australia.

Communication

This activity comprises the following tasks: understanding family or friends; being understood by family or friends; understanding strangers; being understood by strangers.

Contributing family worker

A person who works without pay, in an economic enterprise operated by a relative.

Core activities

Core activities are communication, mobility and self care.

Core-activity limitation

Four levels of core-activity limitation are determined based on whether a person needs help, has difficulty, or uses aids or equipment with any of the core activities (communication, mobility or self care). A person's overall level of core-activity limitation is determined by their highest level of limitation in these activities.

The four levels of limitation are:

- profound: the person is unable to do, or always needs help with, a core-activity task
- severe: the person
 - sometimes needs help with a core-activity task
 - has difficulty understanding or being understood by family or friends
 - can communicate more easily using sign language or other non-spoken forms of communication.
- moderate: the person needs no help but has difficulty with a core-activity task
- mild: the person needs no help and has no difficulty with any of the core-activity tasks, but
 - uses aids and equipment
 - cannot easily walk 200 metres
 - cannot walk up and down stairs without a handrail
 - cannot easily bend to pick up an object from the floor
 - cannot use public transport
 - can use public transport but needs help or supervision
 - needs no help or supervision but has difficulty using public transport.

Couple families

A family based on two persons who are in a registered or de facto marriage and who are usually resident in the same household.

Disability

In the context of health experience, the International Classification of Functioning, Disability and Health (ICF) defines disability as an umbrella term for impairments, activity limitations and participation restrictions. It denotes the negative aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environment and personal factors).

A person has a disability if they report that they have a limitation, restriction or impairment, which has lasted, or is likely to last, for at least six months and restricts everyday activities. This includes:

- loss of sight (not corrected by glasses or contact lenses)
- loss of hearing where communication is restricted, or an aid to assist with, or substitute for, hearing is used

- speech difficulties
- shortness of breath or breathing difficulties causing restriction
- chronic or recurrent pain or discomfort causing restriction
- blackouts, fits, or loss of consciousness
- difficulty learning or understanding
- incomplete use of arms or fingers
- difficulty gripping or holding things
- incomplete use of feet or legs
- nervous or emotional condition causing restriction
- restriction in physical activities or in doing physical work
- disfigurement or deformity
- mental illness or condition requiring help or supervision
- long-term effects of head injury, stroke or other brain damage causing restriction
- receiving treatment or medication for any other long-term conditions or ailments and still restricted
- any other long-term conditions resulting in a restriction.

Discouraged jobseekers

Persons with marginal attachment to the labour force who wanted to work and were available to start work within the next four weeks but whose main reason for not actively looking for work was that they believed they would not find a job for any of the following reasons:

- considered to be too young by employers;
- considered to be too old by employers;
- lacked necessary schooling, training, skills or experience;
- difficulties because of language or ethnic background;
- no jobs in their locality or line of work;
- no jobs available at all; and
- no jobs in suitable hours.

Duration of unemployment

Duration of unemployment is the period of time from when an unemployed person began looking for work, until the end of the reference week; or the period of time since an unemployed person last worked in any job for two weeks or more, until the end of the reference week; whichever was the shorter period.

Prior to April 2001, duration of unemployment was defined in the LFS as the period of time from when an unemployed person began looking for work, until the end of the reference week; or the period of time since an unemployed person last worked full time for two weeks or more, until the end of the reference week; whichever was the shorter period.

Employed

Employed persons include all persons aged 15 years and over who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (comprising employees, employers and own account workers); or worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or
- were employees who had a job but were not at work and were:
 - away from work for less than four weeks up to the end of the reference week; or
 - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week; or
 - away from work as a standard work or shift arrangement; or
 - on strike or locked out; or
 - on workers' compensation and expected to return to their job; or
- were employers or own account workers, who had a job, business or farm, but were not at work.

Employed full time

See full-time employed.

Employed part time

See part-time employed.

Employee

A person who works for a public or private employer and receives remuneration in wages, salary, a retainer fee from their employer while working on a commission basis, tips, piece rates, or payment in kind, or a person who operates their own incorporated enterprise with or without hiring employees.

Employer

A person who operates their own unincorporated economic enterprise or engages independently in a profession or trade, and hires one or more employees.

Employment to population ratio

For any group, the number of employed persons expressed as a percentage of the civilian population in the same group.

Employment restriction

An employment restriction is determined for persons aged 15-64 years with one or more disabilities living in households if, because of their disability, they:

- are permanently unable to work
- are restricted in the type of work they can, or could, do
- need, or would need, at least one day a week off work on average
- are restricted in the number of hours they can, or could, work
- require, or would require, an employer to provide special equipment, modify the work environment or make special arrangements
- require assistance from a disability job placement program or agency
- need, or would need, to be given ongoing assistance or supervision
- would find it difficult to change jobs or get a preferred job.

Extended labour force underutilisation rate

The unemployed, plus the underemployed, plus two groups who are marginally attached to the labour force:

- (i) persons actively looking for work, not available to start work in the reference week, but available to start work within four weeks; and
 - (ii) discouraged jobseekers
- as a percentage of the labour force augmented by (i) and (ii).

Family

Two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering; and who are usually resident in the same household. The basis of a family is formed by identifying the presence of a couple relationship, lone parent-child relationship or other blood relationship. Some households will, therefore, contain more than one family.

Full-time adult ordinary time earnings

One week's ordinary time earnings for full-time adult employees only. See 'Full-time employees', 'Adult employees', 'Weekly ordinary time earnings' and 'Reference period'.

Full-time employed

Persons employed full time are those employed persons who usually worked 35 hours or more a week (in all jobs) and those who, although usually working less than 35 hours a week, worked 35 hours or more during the reference week.

Full-time employees

For earnings data, full-time employees are permanent, temporary and casual employees who normally work the agreed or award hours for a full-time employee in their occupation and received pay for any part of the reference period. If agreed or award hours do not apply, employees are regarded as full-time if they ordinarily work 35 hours or more per week. See 'Full-time adult ordinary time earnings'.

Full-time workers

See 'Full-time employed'.

Fully engaged in education or work

People who, in the survey reference week, were in full-time work or in full-time education, or in part-time work combined with part-time education.

Household

A group of one or more persons in a private dwelling who consider themselves to be separate from other persons (if any) in the dwelling, and who make regular provision to take meals separately from other persons, i.e. at different times or in different rooms. Lodgers who receive accommodation but no meals are treated as separate households. Boarders who receive both accommodation and meals are not treated as separate households. A household may consist of any number of families and non-family members.

Impairment

In the context of health experience, an impairment is defined by the the International Classification of Functioning, Disability and Health (ICF) as a loss or abnormality in body structure or physiological function (including mental functions). Abnormality is used to refer to a significant variation from established statistical norms.

Examples of impairment are loss of sight or a limb, disfigurement or deformity, impairment of mood or emotion, impairments of speech, hallucinations, loss of consciousness and any other lack of function of body organs.

Inner Regional

Inner Regional is a geographical category in the Australian Standard Geographical Classification (ASGC) Remoteness Structure. These categories are based on the Accessibility/Remoteness Index of Australia (ARIA) which measures the remoteness of a point based on the physical road distance to the nearest Urban Centre. For more information on the ASGC, see Statistical Geography Volume 1, Australian Standard Geographical Classification (ASGC), July 2006 (cat. no. 1216.0). See also 'Major Cities', 'Outer Regional', 'Remote' and 'Very Remote'.

Labour force

The labour force is the labour supply available for the production of economic goods and services in a given period, and is the most widely used measure of the economically active population. Persons in the labour force are classified as either employed or unemployed according to their activities during the reference week by using a specific set of priority rules.

Labour force participation rate

The labour force participation rate for any group within the population is the labour force component of that group, expressed as a percentage of the population in that group.

Labour force status

Labour force status is a classification of the civilian population aged 15 years and over into the labour force (those employed or unemployed) or into not in the labour force, as defined. The definitions conform closely to the international standard definitions adopted by the International Conferences of Labour

Statisticians.

Labour force underutilisation rate

This is the sum of the number of persons unemployed and the number of persons in underemployment, expressed as a proportion of the labour force. See 'Unemployed' and 'Underemployed workers'.

Limitation

A person has a limitation if they have difficulty doing a particular activity, need assistance from another person or use an aid. See 'Core-activity limitation'.

Living in households

Includes those living in private dwellings, and some non-private dwellings such as motels, boarding houses and self-care units in retirement villages, but excluding cared accommodation (such as hospitals, nursing homes, aged-care hostels, cared components of retirement villages, and other 'homes', such as children's home).

Lone parent

A person who has no spouse or partner present in the household but who forms a parent-child relationship with at least one dependent or non-dependent child usually resident in the household.

Lone person

A person who makes provision for their food and other essentials for living, without combining with any other person to form part of a multi-person household. They may live in a dwelling on their own or share a dwelling with another individual or family.

Long-term health condition

A disease or disorder which has lasted or is likely to last for at least six months; or a disease, disorder or event (e.g. stroke, poisoning, accident etc.) which produces an impairment or restriction which has lasted or is likely to last for at least six months. Long-term health conditions have been coded to a classification based on the World Health Organisation's International Classification of Diseases, version 10 (ICD-10).

Long-term unemployed

Persons unemployed for 12 months or more. See duration of unemployment for details of the calculation of duration of unemployment.

Long-term unemployment rate

The number of long-term unemployed persons expressed as a percentage of the labour force.

Major Cities

Major Cities is a geographical category in the Australian Standard Geographical Classification (ASGC) Remoteness Structure. These categories are based on the Accessibility/Remoteness Index of Australia (ARIA) which measures the remoteness of a point based on the physical road distance to the nearest Urban Centre. For more information on the ASGC, see Statistical Geography Volume 1, Australian Standard Geographical Classification (ASGC), July 2006 (cat. no. 1216.0). See also 'Regional' and 'Remote'.

Marginal attachment to the labour force

Persons who were not in the labour force in the reference week, wanted to work, and:

- were actively looking for work but did not meet the availability criteria to be classified as unemployed; or
- were not actively looking for work but were available to start work within four weeks or could start work within four weeks if child care was available.

The criteria for determining those in the labour force are based on activity (i.e. working or looking for work) and availability to start work during the reference week. The criteria associated with marginal attachment to the labour force, in particular the concepts of wanting to work and reasons for not actively looking for work, are more subjective. Hence, the measurement against these criteria is affected by the respondent's own interpretation of the concepts used. An individual respondent's interpretation may be affected by their work aspirations, as well as family, economic and other commitments.

Mild core-activity limitation

See 'Core activity limitation'.

Mobility

Mobility comprises the following tasks:

- getting into or out of a bed or chair
- moving about the usual place of residence
- going to or getting around a place away from the usual residence
- walking 200 metres
- walking up and down stairs without a handrail
- bending and picking up an object from the floor
- using public transport.

The first three tasks contribute to the definitions of profound and severe core-activity limitation.

Moderate core-activity limitation

See 'Core activity limitation'.

Not fully engaged in education or work

Includes people who, in the survey reference week, were working part time (but not studying), unemployed (regardless of whether studying part time), studying part time (and not working) and not in the labour force (except those who were full-time students).

Not in the labour force

Persons not in the labour force are those people who, during the reference week, were not in the categories 'employed' or 'unemployed'. They include people who were keeping house (unpaid), retired, voluntarily inactive, permanently unable to work, in gaol, trainee teachers, members of contemplative religious orders, and persons whose only activity during the reference week was jury service or unpaid voluntary work for a charitable organisation.

One parent family

A family consisting of a lone parent with at least one dependent or non-dependent child (regardless of age) who is also usually resident in the household.

Outer Regional

Outer Regional is a geographical category in the Australian Standard Geographical Classification (ASGC) Remoteness Structure. These categories are based on the Accessibility/Remoteness Index of Australia (ARIA) which measures the remoteness of a point based on the physical road distance to the nearest Urban Centre. For more information on the ASGC, see Statistical Geography Volume 1, Australian Standard Geographical Classification (ASGC), July 2006 (cat. no. 1216.0). See also 'Major Cities', 'Inner Regional', 'Remote' and 'Very Remote'.

Own account workers

People who operate their own unincorporated economic enterprise or engaged independently in a profession or trade, and hired no employees.

Owner managers of incorporated enterprises (OMIEs)

People who work in their own incorporated enterprise, that is, a business entity which is registered as a separate legal entity to its members or owners (also known as a limited liability company). These people are classified as employees under 'status in employment'. Technically they are employees, however, they are similar in characteristics to owner managers of unincorporated enterprises.

Owner managers of unincorporated enterprises (OMUEs)

People who operate their own unincorporated enterprise, that is, a business entity in which the owner and the business are legally inseparable, so that the owner is liable for any business debts that are incurred. Includes those engaged independently in a trade or profession. These people are classified as employers under 'status in employment' if their business has employees, or own account workers if they do not.

Participation rate

See 'Labour force participation rate'.

Part-time employed

Persons employed part time are those employed persons who usually worked less than 35 hours a week (in all jobs) and either did so during the reference week, or were not at work in the reference week.

Part-time workers

See 'Part-time employed'.

Profound core-activity limitation

See 'Core activity limitation'.

Reason for leaving last job

Unemployed persons who had worked for two weeks or more in the past two years classified by whether they left that job voluntarily, that is, job leavers; or left that job involuntarily, that is, job losers.

Reference period

The reference period for earnings data refers to the last pay period ending on or before the third Friday of the middle month of the quarter. Where a pay period is fortnightly or monthly, etc., the employer is requested to report only one week's proportion. See 'Full-time adult ordinary time earnings'.

Reference week

Information from occupants of selected dwellings in the Labour Force Survey is obtained by specially trained interviewers, using face to face and telephone interview collection methods. Interviews are generally conducted during the two weeks beginning on the Sunday between the 5th and the 11th of each month. The information obtained relates to the week before the interview period, referred to as the 'reference week'.

The reference week is used to determine a person's employment status at a point in time.

Regional areas

Comprises the 'Inner Regional' and 'Outer Regional' categories of the Australian Standard Geographical Classification (ASGC) Remoteness Structure. These categories are based on the Accessibility/Remoteness Index of Australia (ARIA) which measures the remoteness of a point based on the physical road distance to the nearest Urban Centre. For more information on the ASGC, see Statistical Geography Volume 1, Australian Standard Geographical Classification (ASGC), July 2006 (cat. no. 1216.0). See also 'Major cities' and 'Remote'.

Remote areas (Aboriginal and Torres Strait Islander data)

Comprises the 'Remote' and 'Very Remote' categories of the Australian Standard Geographical Classification (ASGC) Remoteness Structure. These categories are based on the Accessibility/Remoteness Index of Australia (ARIA) which measures the remoteness of a point based on the physical road distance to the nearest Urban Centre. For more information on the ASGC, see Statistical Geography Volume 1, Australian Standard Geographical Classification (ASGC), July 2006 (cat. no. 1216.0). See also 'Major cities' and 'Regional'.

Remote

Remote is a geographical category in the Australian Standard Geographical Classification (ASGC) Remoteness Structure. These categories are based on the Accessibility/Remoteness Index of Australia (ARIA) which measures the remoteness of a point based on the physical road distance to the nearest Urban Centre. For more information on the ASGC, see Statistical Geography Volume 1, Australian Standard Geographical Classification (ASGC), July 2006 (cat. no. 1216.0). See also 'Major Cities', 'Inner regional', 'Outer regional' and 'Very remote'.

Self care

This activity comprises the following tasks: showering or bathing; dressing; eating; toileting; bladder or bowel control.

Severe core-activity limitation

See 'Core activity limitation'.

Specific limitation or restriction

A limitation in core activities, or a restriction in schooling and/or employment. This corresponds with the concept of 'handicap' used in previous ABS publications on disability. See 'Core activity limitation'.

State capital cities

The areas determining the six state capital cities are the Statistical Divisions for those capital cities defined in the Statistical Geography: Volume 1 - Australian Standard Geographical Classification (ASGC) (cat. no. 1216.0).

Status in employment

Employed persons classified by whether they were employees, employers, own account workers or contributing family workers.

Underemployed workers

Underemployed workers are employed persons who want, and are available for, more hours of work than they currently have. They comprise:

- persons employed part time who want to work more hours and are available to start work with more hours, either in the reference week or in the four weeks subsequent to the survey; and
- persons employed full time who worked part-time hours in the reference week for economic reasons (such as being stood down or insufficient work being available). It is assumed that these people wanted to work full time in the reference week and would have been available to do so.

Underemployment rate

The number of underemployed workers expressed as a percentage of the labour force.

Underutilisation rate

See 'Labour force underutilisation rate'.

Unemployed

Persons aged 15 years and over who were not employed during the reference week, and

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week and were available for work in the reference week; or
- were waiting to start a new job within four weeks from the end of the reference week and could have started in the reference week if the job had been available then.

Unemployment rate

The number of unemployed persons expressed as a percentage of the labour force.

Usual hours worked

The hours usually worked per week by an employed person.

Very remote

Very Remote is a geographical category in the Australian Standard Geographical Classification (ASGC) Remoteness Structure. These categories are based on the Accessibility/Remoteness Index of Australia (ARIA) which measures the remoteness of a point based on the physical road distance to the nearest Urban Centre. For more information on the ASGC, see Statistical Geography Volume 1, Australian Standard Geographical Classification (ASGC), July 2006 (cat. no. 1216.0). See also 'Major cities', 'Inner regional', 'Outer regional' and 'Remote'.

Volume of potential labour in the labour force

The volume of potential labour in the labour force is equal to the hours of labour sought by unemployed persons, plus the hours of labour preferred by underemployed workers (both utilised and unutilised), plus the hours of labour usually provided by employed persons who are not underemployed.

Volume labour force underutilisation rate

The total volume of underutilised labour in the labour force (hours sought by unemployed people, plus additional hours preferred by underemployed people), as a percentage of the volume of potential labour in the labour force.

Weekly ordinary time earnings

Weekly ordinary time earnings refers to one week's earnings of employees for the reference period, attributable to award, standard or agreed hours of work. It is calculated before taxation and any other deductions (e.g. superannuation, board and lodging) have been made. Included in ordinary time earnings are:

- award, workplace and enterprise bargaining payments, and other agreed base rates of pay
- over-award and over-agreed payments, penalty payments, shift and other allowances
- commissions and retainers
- bonuses and similar payments related to the reference period
- payments under incentive or piecework
- payments under profit sharing schemes normally paid each pay period
- payment for leave taken during the reference period
- all workers' compensation payments made through the payroll; and
- salary payments made to directors.

Excluded are:

- amounts salary sacrificed
- non-cash components of salary packages
- overtime payments
- retrospective pay
- pay in advance
- leave loadings
- severance, termination and redundancy payments, and
- other payments not related to the reference period.

See 'Full-time adult ordinary time earnings'.

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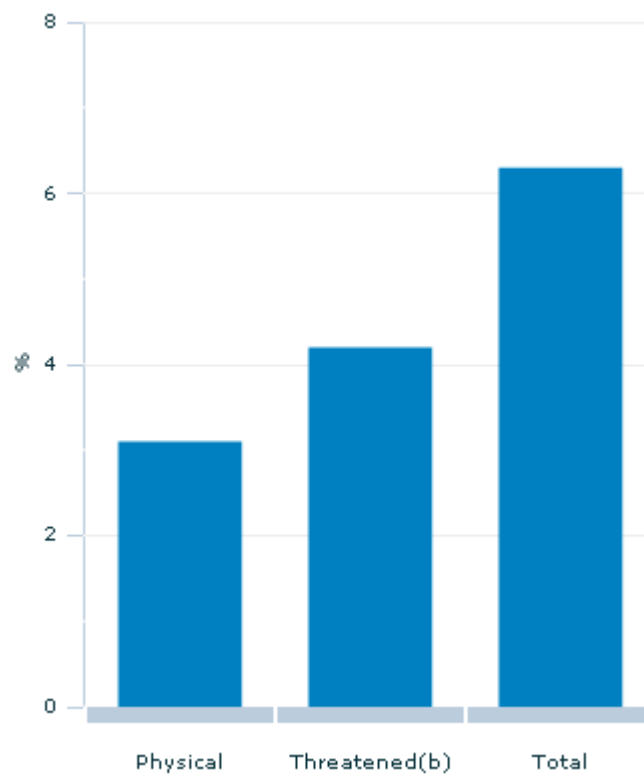
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Victims of personal crime - assault - 2008-09(a)

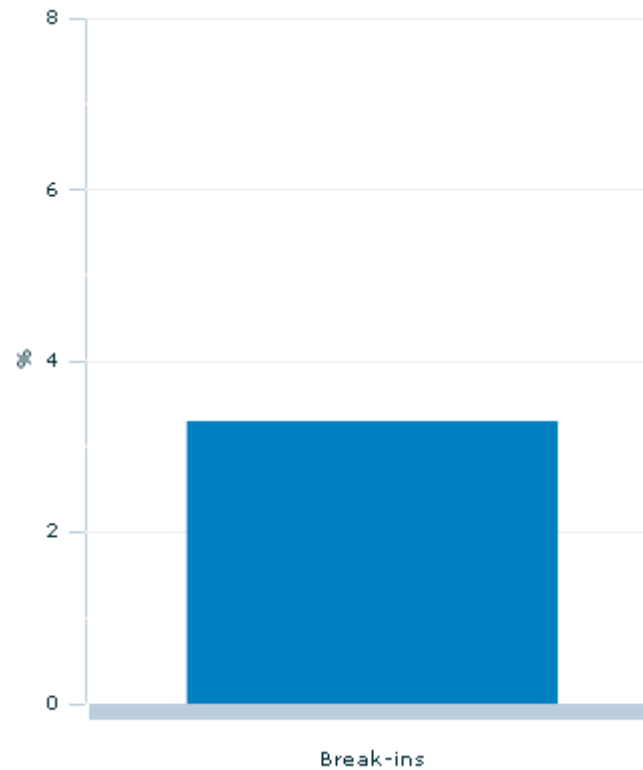


In 2008-09, 6.3% of all Australians aged 15 years and over were victims of at least one assault in the 12 months prior to interview.

(a) Reported as occurring in the 12 months prior to interview. (b) Includes both face-to-face and non face-to-face incidents



Victims of household crime - break-ins - 2008-09(a)



Over the same 12 month period, 3.3% of households were victims of at least one break-in (including home, garage or shed).

(a) Proportion of households that reported a break-in occurring in the 12 months prior to interview.

 Commentary

 MAP Data

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CRIME AND PROGRESS

Crime takes many forms and can have a major impact on the wellbeing of victims, their families and friends, and the wider community. Those most directly affected may suffer financially, physically, psychologically or emotionally. Fear of crime can affect people by restricting community engagement, reducing levels of trust and impacting on social cohesion.

There are other costs of crime, including the provision of law enforcement services by the police, the courts and associated legal services, and corrective services. Although government agencies take on the major responsibility for law enforcement, many businesses and householders also bear costs in protecting against, or paying for, the consequences of crime. Such costs include insurance and security equipment and services.

If it were possible to measure the full cost of crime then it might be possible to produce a single number by which we could measure progress in this area. But there is no well established way of doing this, nor are there comprehensive data. Although information about expenditure on crime-related services provides some idea of the financial costs of crime to the community, the full impact on victims, and the subsequent costs to the wider community, might never be fully known (Mahew 2003). This is partly because the full extent of crime cannot be measured through available information systems. Indeed, it is well known that many crimes are never reported to police. Furthermore, estimating the costs of crime, even for those crimes that are reported, is also fraught with difficulties: each offence has different consequences for those affected, and in any case, it would be difficult to place a monetary value on these.

This section uses crime victimisation rates to assess whether life in Australia is getting better. These rates reflect the incidence of crime regardless of whether the crime has been reported to police. Currently the two headline indicators are victims of assault and victims of property crime (break-ins). However, as a result of changing methodology, the most recent crime victimisation data is not comparable to earlier data. The first data point for both headline indicators is 2008-09, and this means that no time series is currently available against which to assess whether there has been a positive improvement in crime victimisation rates in Australia over the last 10 years.

Additional information on crime is provided on other types of personal crime (robbery and sexual assault) and other types of household crimes (malicious property damage, theft). In addition, further contextual information has been included to provide a picture of crime in Australia and to highlight those groups most at risk of crime.

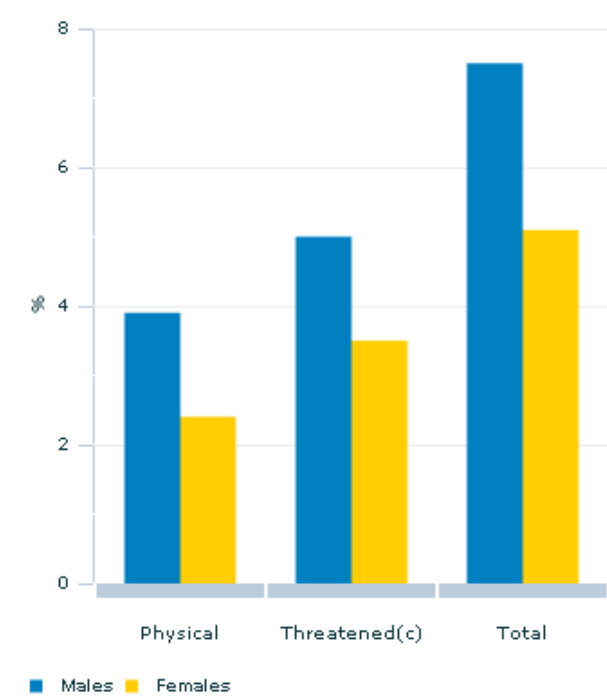
For a full list of definitions, please see the Crime glossary.

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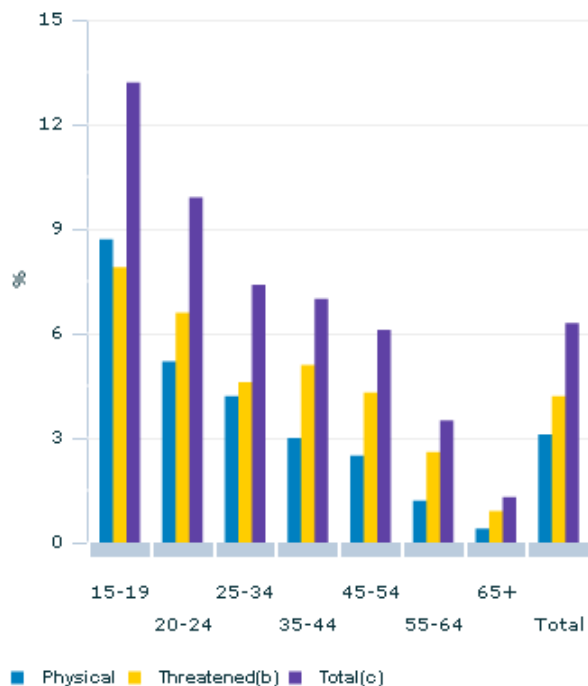
Victims of assault(a)(b) - 2008-09



Footnote(s): (a) Persons aged 15 years and over. (b) Reported as occurring in the 12 months prior to interview. See endnote 1. (c) Includes both face-to-face and non face-to-face incidents.

Source(s): ABS Crime Victimization, Australia, 2008-09 (cat. no. 4530.0)

Victims of assault by age(a) - 2008-09



Footnote(s): (a) Reported as occurring in the 12 months prior to interview. (b) Includes both face-to-face and non face-to-face incidents. (c) Includes physical assault, face-to-face threatened assault and non face-to-face threatened assault. See endnote 1.

Source(s): ABS Crime Victimization, Australia, 2008-09 (cat. no. 4530.0); Data available on request, ABS Crime Victimization Survey.

PERSONAL CRIMES - ASSAULT

Crimes committed against individuals impact both directly and indirectly on the wellbeing of the victim, as well as the people around them.

In 2008-09, 6.3% (or 1.1 million) of all Australians aged 15 years and over reported that they had been the victim of at least one assault in the 12 months prior to interview. Of these victims, 59% were men.

For the purpose of this page, the term assaults will refer to victims of physical assault or threatened assaults. Sexual assaults are examined separately in the 'Sexual assault' page. In the 12 months prior to interview, more people reported being a victim of a threatened assault (4.2%) than a physical assault (3.1%) (Endnote 1).

Men were more likely to be victims of both physical and threatened assault than women. In the twelve months prior to interview, 3.9% of men were the victims of at least one physical assault, compared with 2.4% of women. For threatened assault, 5.0% of men and 3.5% of women were victims.

Young people were also more likely to be victims of assault. Of people aged 15-19 years, 13.2% were victims of at least one assault, 8.7% were victims of physical assault and 7.9% were victims of threatened assault (Endnote 1). The likelihood of being a victim of assault decreased steadily with age. Of people aged 65 years and over, 1.3% were victims of least one assault, with 0.4% victims of physical assault and 0.9% victims of threatened assault.

ENDNOTES

1. Some people were the victims of both physical and threatened assault during the 12 months prior to interview, making it possible for victims to be counted in both assault categories. Thus, the sum of the two sets of victims, and their victimisation rates, are greater than the total number of victims of assault.

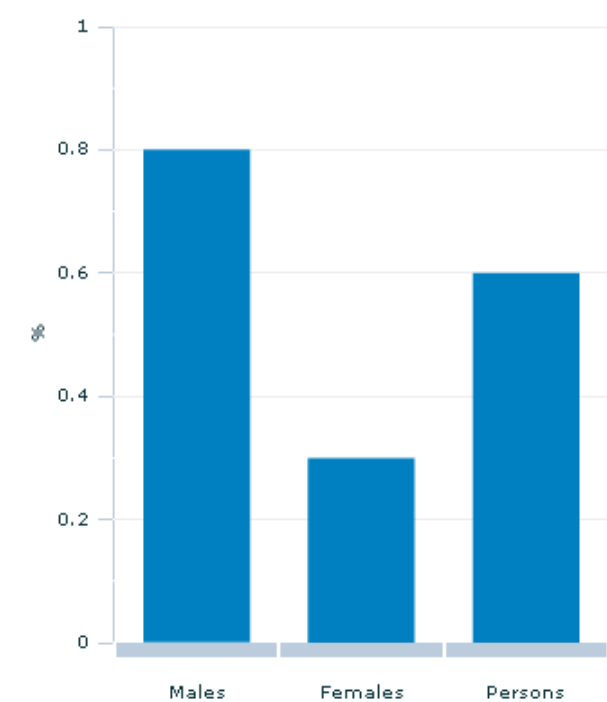
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Victims of robbery(a)(b) - 2008-09



Footnote(s): (a) Persons aged 15 years and over. (b) Reported as occurring in the 12 months prior to interview.

Source(s): ABS Crime Victimization, Australia, 2008-09 (cat. no. 4530.0)

ROBBERY

Robbery can have a negative financial, emotional and psychological impact on an individual's or a family's wellbeing. In 2008-09, 96,700 Australians (0.6% of people aged 15 years and over) were the victim of at least one robbery.

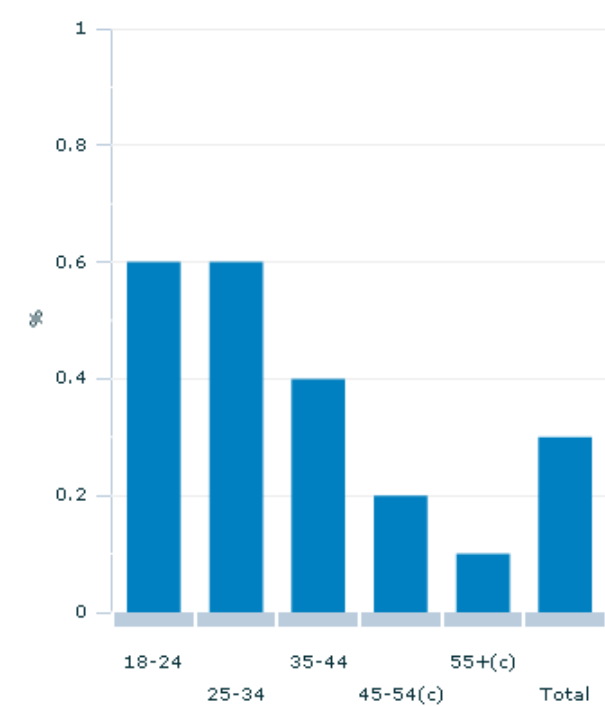
As with victims of assault, men are more likely to be victims of robbery than women. In the 12 months prior to interview, 0.8% of men were the victims of at least one robbery, compared with 0.3% of women. The chance of being a victim of robbery decreased steadily with age.

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Victims of sexual assault(a)(b) - 2008-09



Footnote(s): (a) Persons aged 18 years and over. (b) Reported as occurring in the 12 months prior to interview. (c) Estimates for people aged 45-54 and 55 and over have a relative standard error of 25% to 50% and should be used with caution.

Source(s): ABS Crime Victimization, Australia, 2008-09 (cat. no. 4530.0)

SEXUAL ASSAULT

The social, psychological and physical effects of sexual assault on individuals and families can be severe, and sexual assault remains one of the most underreported of all personal crimes (AIFS 2010). There are a number of personal, social, cultural and institutional barriers that may prevent people reporting incidents to the police or reporting incidents in surveys, therefore, it is likely that survey reported victimisation rates underestimate the true incidence of sexual assault.

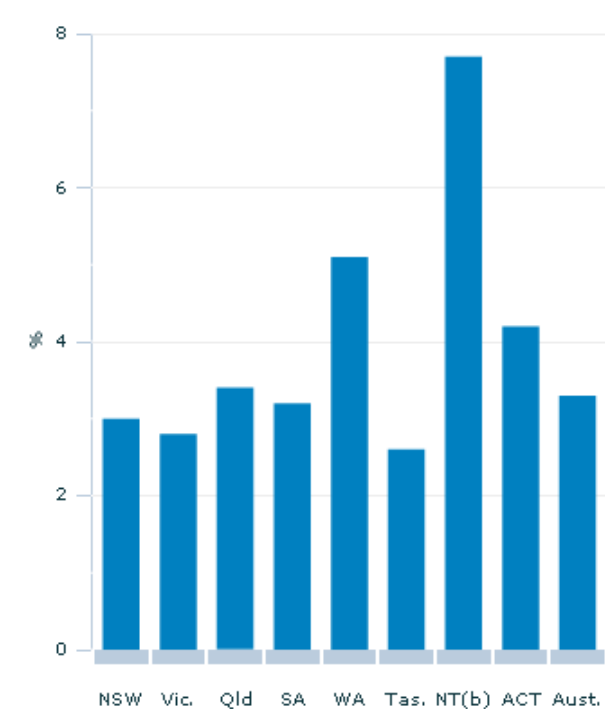
In 2008-09, 52,500 (0.3%) Australians aged 18 years and over reported in the survey that they were victims of at least one sexual assault, with most of these victims being women (78%).

Younger people were more likely to be victims of sexual assault than older people. Of those aged 18-24 years or 25-34 years, 0.6% reported in the survey that they were victims of at least one sexual assault in 2008-09.

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Victims of break-ins(a) - 2008-09



Footnote(s): (a) Proportion of households that reported a break-in occurring in the 12 months prior to interview. (b) Refers to mainly urban areas. See endnote 1.

Source(s): ABS Crime Victimization, Australia, 2008-09 (cat. no. 4530.0)

HOUSEHOLD CRIMES - BREAK-INS

Victims of household break-ins may experience financial losses and psychological distress due to feelings of vulnerability and associated stressors.

In 2008-09, 3.3% of Australia's 8.2 million households were victims of at least one break-in into their home, garage or shed in the 12 months prior to interview.

In 2008-09, households in the Northern Territory and Western Australia were more likely to be the victims of a break-in (7.7% and 5.1% of households respectively), whilst households in Tasmania and Victoria were the least likely to be victims of a break-in (2.6% and 2.8% of households respectively) (Endnote 1).

ENDNOTES

1. The 2008-09 Crime Victimization Survey was conducted in both urban and rural areas in all states and territories, but excluded people living in very remote parts of Australia. The exclusion of these people is expected to have only a minor impact on any aggregate estimates that are produced for individual states and territories, except in the Northern Territory where such people account for around 23% of the population.

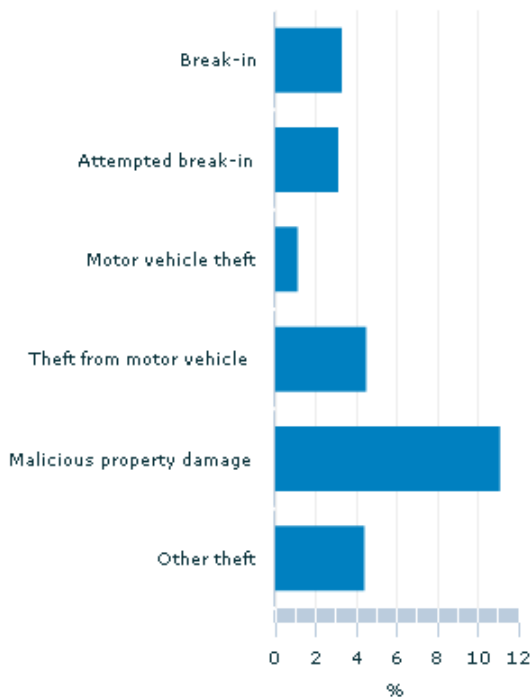
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Victims of selected household crimes(a) - 2008-09



Footnote(s): (a) Proportion of households that reported a selected household crime in the 12 months prior to interview.

Source(s): ABS Crime Victimization, Australia, 2008-09 (cat. no. 4530.0)

OTHER HOUSEHOLD CRIMES

Household crimes may affect an individual's or a family's feelings of safety or security and may result in property damage and/or financial loss.

In 2008-09, malicious property damage affected more households than any of the other selected household crimes, with 11.1% of households falling victim to at least one incident. Theft from a motor vehicle was also common with 4.5% of households falling victim to at least one incident.

Households in the Northern Territory were more likely to experience malicious property damage (19.6% of households), theft from a motor vehicle (7.9% of households), other thefts (8.2% of households), attempted break-ins (8.1%), break-ins (7.7%) and motor vehicle thefts (2.0%) than any other state or territory (Endnote 1).

ENDNOTES

1. The 2008-09 Crime Victimization Survey was conducted in both urban and rural areas in all states and territories, but excluded people living in very remote parts of Australia. The exclusion of these people is expected to have only a minor impact on any aggregate estimates that are produced for individual states and territories, except in the Northern Territory where such people account for around 23% of the population.

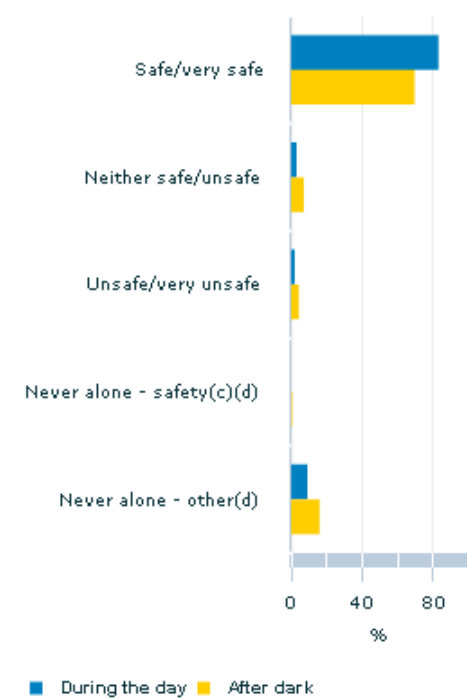
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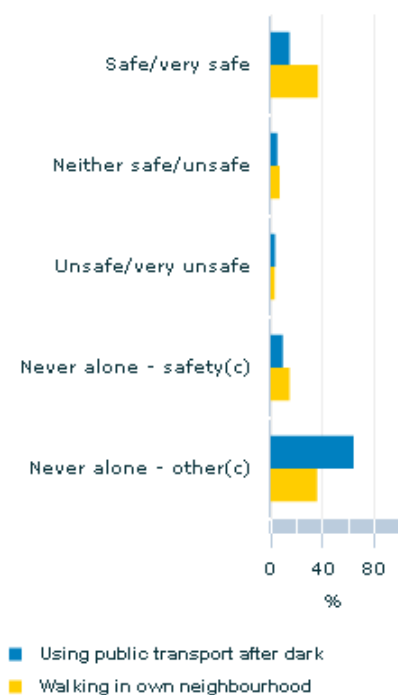
Feelings of safety at home alone(a)(b) - 2008-09



Footnote(s): (a) Reported as occurring in the 12 months prior to interview. (b) Persons aged 15 years or over. (c) 'During the day' estimate has a relative standard error of 25% to 50% and should be used with caution. (d) Main reason for never being alone.

Source(s): ABS Crime Victimisation, Australia, 2008-09 (cat. no. 4530.0)

Feelings of safety when alone in public places(a)(b) - 2008-09



Footnote(s): (a) Reported as occurring in the 12 months prior to interview. (b) Persons aged 15 years and over. (c) Main reason for never being alone.

Source(s): ABS Crime Victimization, Australia, 2008-09 (cat. no. 4530.0)

FEELINGS OF SAFETY

Fear of crime can affect the health and wellbeing of individuals and communities (ABS 2010d). Perceptions of safety when alone may indicate perceptions of problems in the neighbourhood, previous experience with crime and the level of trust in their local community. Higher proportions of people who feel safe indicate higher levels of trust and social cohesion within the community.

In 2008-09, most Australians aged 15 years or over reported feeling safe or very safe at home alone during the day (83%), and safe or very safe at home alone after dark (70%). Very few people reported feeling unsafe or very unsafe at home alone after dark (4.3%).

When walking alone after dark in their own neighbourhood, 37% of people felt safe or very safe, whilst 15% said they would never do this alone because of safety concerns. Almost three-quarters (74%) of people who felt unsafe when alone were women (ABS 2010d).

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CRIME IN AUSTRALIA

Crime affects the wellbeing of individuals and families. In Australia, high crime rates are often associated with poverty, unemployment, low levels of educational attainment, family relationship problems and high levels of drug use. The prevalence of crime may also depend on available opportunities and the size of the potential rewards, perhaps weighed against the risk of detection, apprehension and punishment.

Common responses to increasing levels of crime include increasing prevention and detection activities, and increasing penalties, such as fines or terms of imprisonment.

Further information is included in the following sections to provide a broader picture of crime in Australia. The issues explored include crime reporting rates, homicide rates, imprisonment rates and repeated crime in Australia.

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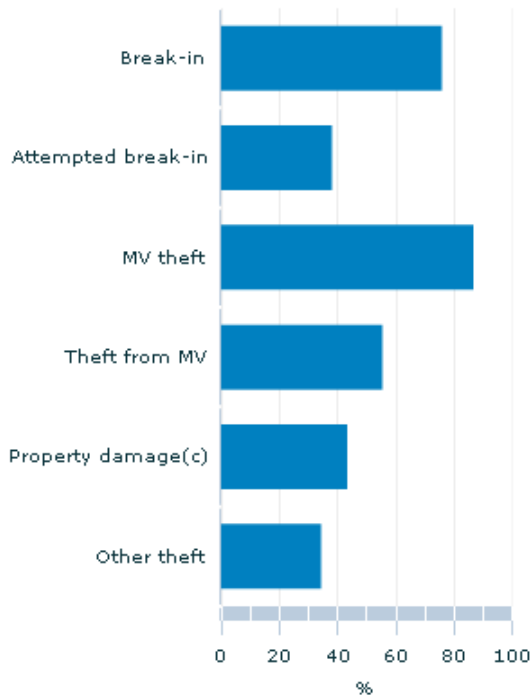
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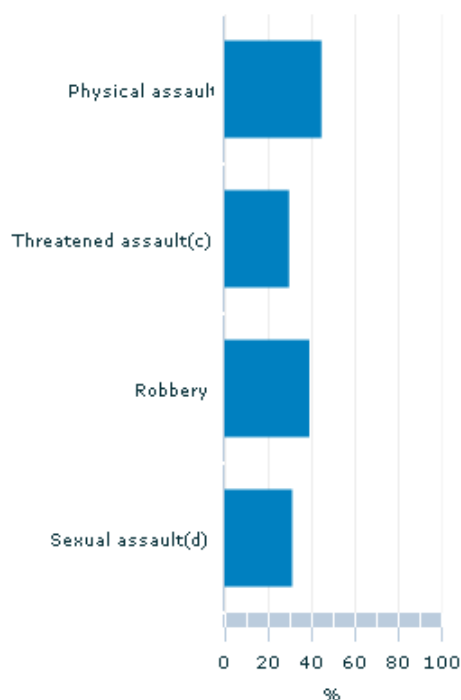
Household crime reporting rates(a)(b) - 2008-09



Footnote(s): (a) Proportion of victims who reported most recent incident to police. (b) Reported as occurring in the 12 months prior to interview. (c) Malicious.

Source(s): ABS Crime Victimization, Australia, 2008-09 (cat. no. 4530.0)

Personal crime reporting rates(a)(b) - aged 15 years and over - 2008-09



Footnote(s): (a) Proportion of victims who reported most recent incident to police. (b) Reported as occurring in the 12 months prior to interview. (c) Face-to-face incidents only. (d) Persons aged 18 years and over.

Source(s): ABS Crime Victimization, Australia, 2008-09 (cat. no. 4530.0)

REPORTING CRIME TO POLICE

Certain types of crimes are more likely to be reported to the police than others (ABS 2010a). The reasons for not reporting crimes vary, depending on the crime, and could include the following: the victim did not perceive the crime to be serious enough to warrant reporting; the victim did not think there was anything the police could do; or the victim felt they could resolve the matter themselves. In order to place an insurance claim for property damage or loss, most insurance companies require a police report and this may be a reason for causing some victims to report particular types of crimes, especially household crimes.

In 2008-09, the crimes most likely to be reported to police were household crimes such as motor vehicle theft (87% of victims reported the most recent incident to the police) and break-ins (76%). Generally personal crimes were the least likely to be reported to the police. For example, 30% of face-to-face threatened assault incidents were reported to the police.

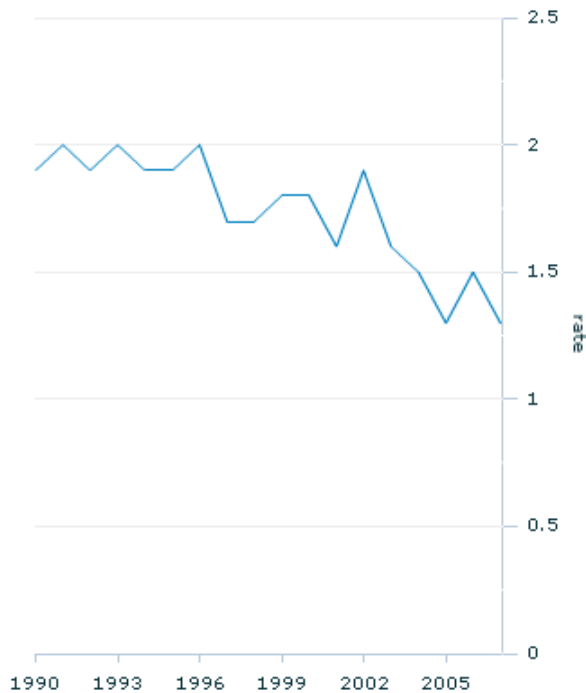
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Homicide rate(a)(b) - 1990 to 2007(c)



Footnote(s): (a) Per 100,000 population. (b) Includes Norfolk Island. (c) Year ending 30 June.

Source(s): AIC NHMP 1989-90 to 2006-07

HOMICIDE

While representing only a small fraction of overall crime, homicide is the most serious of all criminal offences. In 1989-90, there were 306 homicides, equivalent to 1.9 victims per 100,000 population. By 2006-07, there were 260 homicides, representing a decrease in the rate to 1.3 victims per 100,000 population, the lowest rate since the National Homicide Monitoring Program (NHMP) began in 1989 (AIC 2008).

In 2006-07, men were more likely to be victims of homicide (1.8 victims per 100,000 population) than women (0.8 victims per 100,000 population) (AIC 2008).

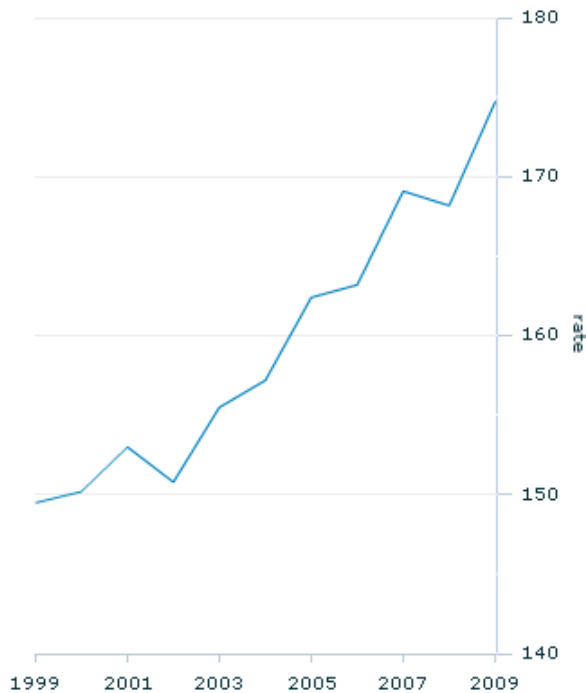
Men were also more likely to commit homicide than women, with an offender rate of 2.3 offenders per 100,000 men in 2006-07, compared to an offender rate of 0.5 offenders per 100,000 women for women (AIC 2008).

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Imprisonment rate(a) - 1999 to 2009(b)



Footnote(s): (a) Rate per 100,000 adult population. (b) At 30 June.

Source(s): ABS Prisoners in Australia, 2009 (cat. no. 4517.0)

IMPRISONMENT

Although courts may impose various penalties for people convicted of criminal offences (such as fines, community service orders and the like) imprisonment is the most severe social response to crime in Australia.

Changes in the imprisonment rate do not necessarily measure changes in the level of crime or the level of success in apprehending and convicting criminals, although they may be related. Changes in imprisonment rates can reflect changes in community attitudes (played out through the court system), community preferences for the severity of response to crime, or changes in prison capacity.

In June 2009 there were 29,317 adults in prison (representing an imprisonment rate of 175 prisoners per 100,000 adult population) compared to 21,538 prisoners in June 1999 (150 prisoners per 100,000 adult population) (ABS 2009).

The imprisonment rate for men in June 2009 was 13 times the rate for women (329 prisoners per 100,000 male adults versus 25 prisoners per 100,000 female adults). About two thirds (67%) of all prisoners were aged between 20 and 39 years. The median age of prisoners was 33.4 for men and 34.2 for women.

Young people in detention

The Australian Institute of Health and Welfare (AIHW) collects information from each state and territory, on behalf of the Australasian Juvenile Justice Administrators, about the numbers and characteristics of young people under the supervision of juvenile justice agencies (AIHW 2009).

Excluding New South Wales, in 2007-08, 3,378 young people were held in juvenile detention. Most

detainees (over 90%) were male. Just under half of the young detainee population identified as being Indigenous. It is important to note that a young person may have been in custody more than once during the reference period (AIHW 2009).

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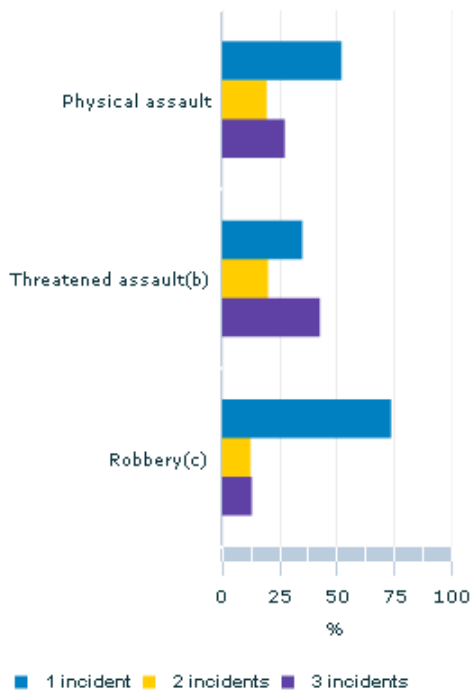
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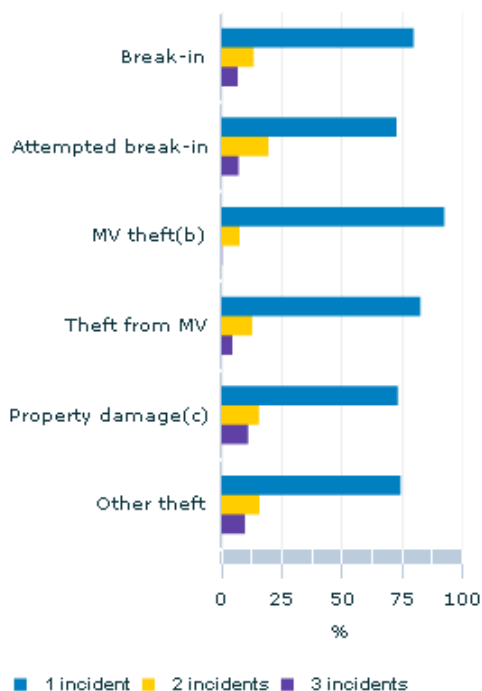
Victims of personal crime - by number of incidents(a) - 2008-09



Footnote(s): (a) Incidents experienced in the 12 months prior to interview. Excludes persons who did not give number of incidents experienced. (b) Includes both face-to-face and non face-to-face incidents. (c) Data for robbery for 2 incidents, or 3 or more incidents, have a relative standard error of 25% to 50% and should be used with caution.

Source(s): ABS Crime Victimization, Australia, 2008-09 (cat. no. 4530.0)

Victims of household crime - by number of incidents(a) - 2008-09



Footnote(s): (a) Incidents experienced in the 12 months prior to interview. Excludes persons who did not give number of incidents experienced. (b) Data for motor vehicle theft for 3 or more incidents have a relative standard error greater than 50% and is considered too unreliable for general use. (c) Malicious.

Source(s): ABS Crime Victimization, Australia, 2008-09 (cat. no. 4530.0)

REPEAT VICTIMS OF CRIME

The negative effects of crime, such as damage to the financial, physical, psychological or emotional wellbeing of individuals and families, are amplified when people fall victim to repeated crimes.

In 2008-09, victims of selected personal crimes who had experienced three or more incidents during the 12 months prior to interview, were more common than victims where only two incidents occurred. Of those people (aged 15 years and over) who had experienced at least one physical assault, 52% were victims of one physical assault, 20% were victims of two physical assault and 27% were victims of three or more physical assaults.

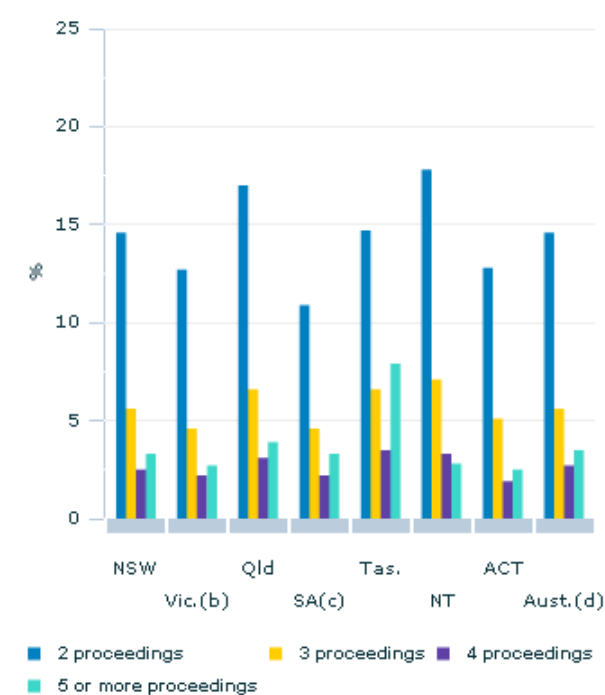
For threatened assault, 35% were victims of one assault, 20% were victims of two assaults and 43% experienced three or more incidents of threatened assault.

The pattern of victimisation for household crimes was different from that of personal crimes, as most victims experienced only one incident of a particular crime during the reference year. For example, of the households who experienced break-ins in 2008, 80% were a victim of one break-in.

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Repeat offenders(a) - 2008-09



Footnote(s): (a) Proportion of all offenders. (b) Victorian data may be understated as infringement notices are excluded. See Crime glossary. (c) South Australia and Australian data may be overstated. See Crime glossary for more information on Cannabis Expiation Notices and General Expiation Notices. (d) Excludes Western Australia, hence national data are not available for police proceedings counts. See endnote 1.

Source(s): ABS Recorded Crime - Offenders, 2008-09 (cat. no. 4519.0)

REPEAT OFFENDERS OF CRIME

Repeat offenders of crime represent a significant problem for the justice system as well as for wider society through financial loss or property damage for victims, or through reduced feelings of safety associated with repeated criminal behaviour.

In 2008-09, excluding Western Australia, nearly three-quarters (74%) of offenders had one police proceeding against them, 15% had two police proceedings, 5.6% had three, 2.7% had four and 3.5% had five or more proceedings (Endnote 1).

ENDNOTES

1. Western Australia police utilise two separate offender recording systems for police purposes. The data for the Recorded Crime - Offenders collection is sourced from both systems. Data were successfully matched between the two systems to enable the production of offender counts and

associated demographic and offence information. Data on police proceedings, however, could not be matched between these two systems resulting in an overestimate of the number of proceedings. Therefore data about police proceedings are not published. This has resulted in national data not being available.

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PROGRESS OF AUSTRALIANS

Crime does not affect all Australians in a uniform fashion. Various groups within the population experience higher levels of crime than others, and where people live may affect their experience of crime.

Areas with high crime rates tend to have interrelated problems of social disadvantage such as low income, high unemployment, low levels of educational attainment, family relationship problems and high levels of drug use.

Among a number of groups of interest are young people, Aboriginal and Torres Strait Islander peoples, and people born overseas. This section also present victimisation and offender rates by state and territory.

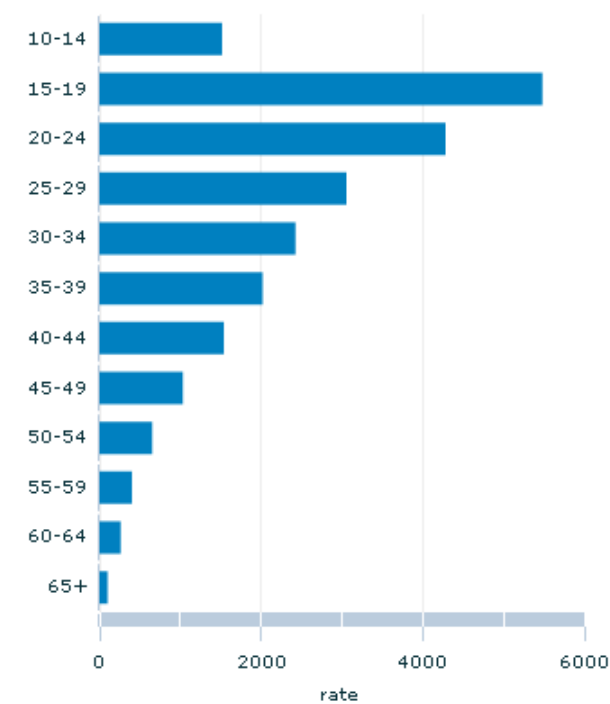
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Offender rate(a) by age - 2008-09



Footnote(s): (a) Rate per 100,000 population in the relevant age group.

Source(s): ABS Recorded Crime - Offenders, 2008-09 (cat. no. 4519.0)

Offender rate(a)(b) for those aged 15-19 years



Footnote(s): (a) Rate per 100,000 population aged 15-19 years. (b) South Australian and Australian data may be overstated and Victorian and Australian data are understated. See Crime glossary for more information on Cannabis Expiation Notices, General Expiation Notices and infringement notices.

Source(s): ABS Recorded Crime - Offenders, 2008-09 (cat. no. 4519.0)

YOUNG PEOPLE

Patterns of crime vary according to age and there are concerns that younger adults are more vulnerable both to becoming involved in a crime, and also to being victimised.

Young offenders of crime

Young people aged 15-24 years are more likely to commit crimes than older people. The reasons why young people commit crimes may include boredom, peer group pressure and risk-taking behaviour (ABS 2008b).

In 2008-09, the rate of offenders in the criminal justice system was highest for people aged 15-19 years at 5,484 offenders per 100,000 people aged 15-19 years. The peak age at which young people had police proceedings brought against them was 18 years. In 2008-09, there were 6,144 offenders per 100,000 people aged 18 years, an increase on 2007-08 figures (5,843 per 100,000 people aged 18 years).

Young people aged 15-19 years in Tasmania and the Northern Territory were more likely to offend (9,482 and 9,122 offenders per 100,000 people aged 15-19 years respectively) than those living in other Australian states and territories in 2008-09.

Young victims of crime

Younger people are also more likely than older people to be the victims of some personal crimes. For more information see the Personal crimes - assault section linked below.

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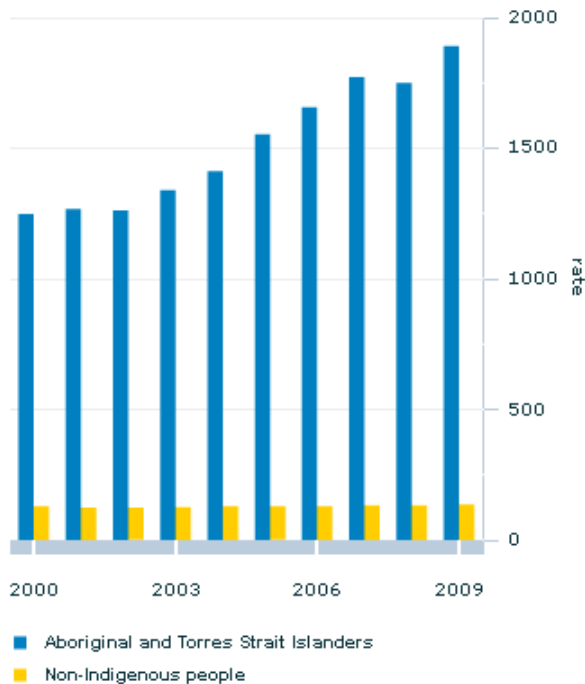
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Crime

Imprisonment rate(a) - 2000 to 2009



Footnote(s): (a) Age standardised rates per 100,000 population: crude imprisonment rates adjusted to account for age differences between the Aboriginal and Torres Strait Islander and non-Indigenous populations by using the total Australian Estimated Resident Population at 30 June 2001 as the standard population.

Source(s): ABS Prisoners in Australia, 2009 (cat. no. 4517.0)

ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLES

The level of crime experienced by Aboriginal and Torres Strait Islander peoples is very high in comparison to the rest of the Australian population. On average, Aboriginal and Torres Strait Islander peoples experience considerably higher crime victimisation rates and higher imprisonment rates. In 2008, around one-quarter (23%) of Indigenous people aged 15 years and over reported being a victim of physical or threatened violence in the last 12 months, and one in seven (15%) had experienced at least one episode of physical violence in the previous year (ABS 2010c).

Only New South Wales, Queensland, South Australia and the Northern Territory currently meet ABS quality standards for national reporting of police recorded crime victimisation rates for Indigenous Australians. In 2009 in the Northern Territory, police recorded 5,985 Indigenous people per 100,000 Indigenous population as victims of assault in 2009 compared to 1,150 non-Indigenous people per 100,000 non-Indigenous population. The difference between Indigenous and non-Indigenous assault victimisation was also very pronounced in South Australia (5,909 and 896 victims per 100,000 Indigenous/non-Indigenous population respectively).

Imprisonment

The imprisonment of Indigenous Australians is a major issue of social concern in Australia, with imprisonment rates much higher than those of the non-Indigenous population. In June 2009, the age standardised imprisonment rate for Indigenous prisoners was 1,891 per 100,000 adult Indigenous population, compared to 136 non-Indigenous prisoners per 100,000 adult non-Indigenous population. Twenty-five per cent of all prisoners in Australia in 2009 were Indigenous.

Deaths in custody

The 1991 Royal Commission into Aboriginal Deaths in Custody investigated the deaths of Indigenous people that occurred in police or prison custody between 1980 and 1989. The Royal Commission was established due to growing public concern that Indigenous deaths were increasingly common and poorly explained. The National Deaths in Custody Monitoring and Research Program at the Australian Institute of Criminology was subsequently established in response to the Royal Commission, and monitors and reports Australian deaths in police custody.

Of the 74 deaths in all forms of custody in Australia during 2007, 12% or 9 deaths were of Indigenous people. The largest number of deaths in custody recorded since 1990 was in 1997 (105, of which 15 were deaths of Indigenous people). The largest number of deaths in custody of Indigenous people was in 1995 (22 deaths of Indigenous people from a total of 87 deaths in custody).

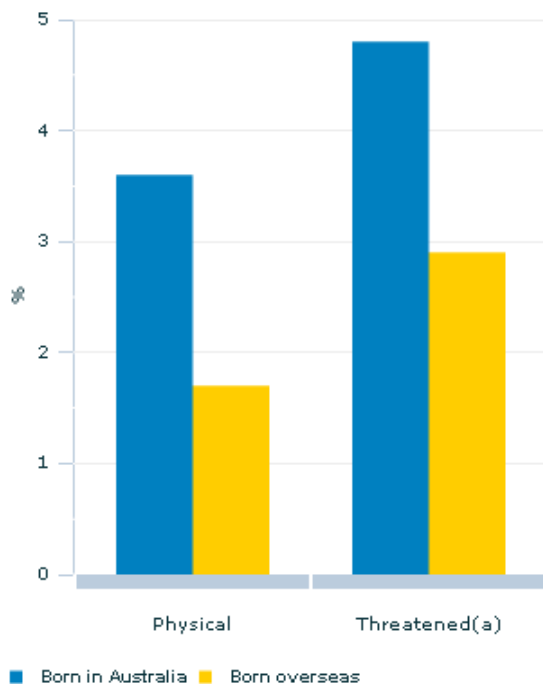
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Victims of assault - whether born overseas - 2008-09



Footnote(s): (a) Includes both face-to-face and non face-to-face incidents.

Source(s): ABS Crime Victimization, Australia, 2008-09 (cat. no. 4530.0)

PEOPLE BORN OVERSEAS

Evidence of migrants' experience of crime in Australia is difficult to collect and to analyse, particularly where specific ethnic groups account for a small proportion of the total population (ABS 2008a). Also, migrants are not a homogenous group, hence general observations about Australia's migrant population may mask differences between specific ethnic groups.

People born overseas have lower victimisation rates for assault than people born in Australia. In 2008-09, the victimisation rate for people born overseas was 1.7% for physical assault and 2.9% for threatened assault. For people born in Australia, the victimisation rate was 3.6% for physical assault and 4.8% for threatened assault.

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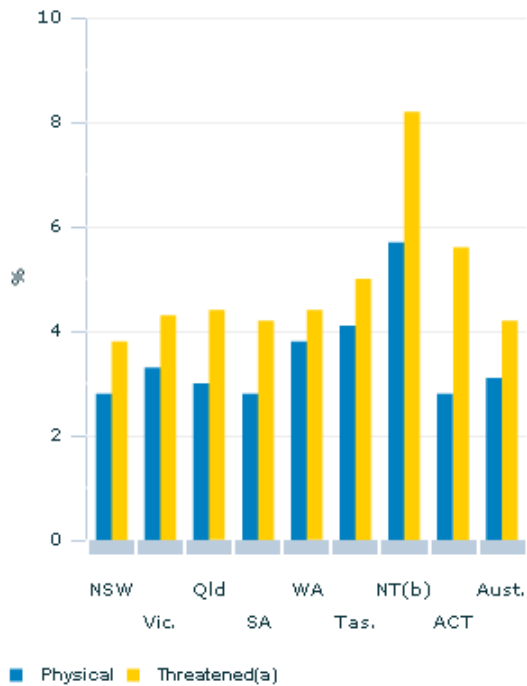
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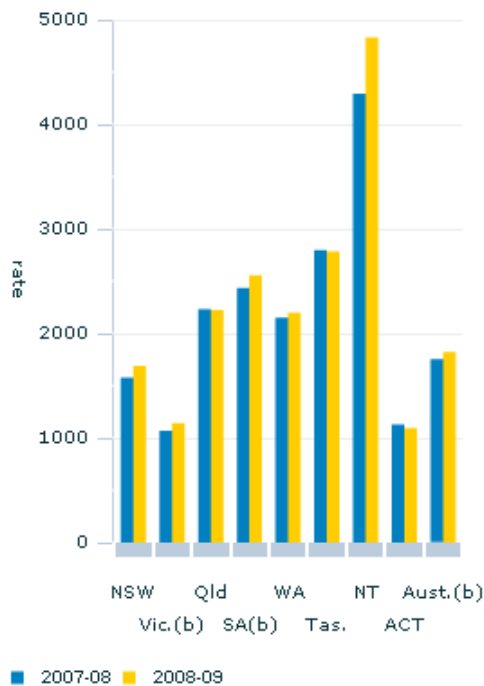
Victims of assault - by state and territory - 2008-09



Footnote(s): (a) Includes both face-to-face and non face-to-face incidents. (b) Refers to mainly urban areas. See endnote 1.

Source(s): ABS Crime Victimization, Australia, 2008-09 (cat. no. 4530.0)

Offender rate - by state and territory(a) - 2007-08 and 2008-09



Footnote(s): (a) Rate per 100,000 people aged 10 years and over. (b) South Australian and Australian data may be overstated and Victorian and Australian data are understated. See Crime glossary for more information on Cannabis Expiation Notices, General Expiation Notices and infringement notices.

Source(s): ABS Recorded Crime - Offenders, 2008-09 (cat. no. 4519.0)

STATES AND TERRITORIES

Comparisons of victimisation and offender rates across states and territories may be useful in evaluating the availability, accessibility and/or effectiveness of various crime prevention and reduction strategies. However, comparisons between states and territories may be affected by differences in legislation, and in administrative or organisational arrangements.

People living in the Northern Territory were most likely to be victims of physical assault in 2008-09 compared to other states or the ACT, with 5.7% of people falling victim to at least one physical assault (Endnote 1). People in New South Wales, South Australia and Australian Capital Territory were the least likely to be victims of physical assault (2.8% for each).

In 2008-09 the Northern Territory had the highest victimisation rate for threatened assault (8.2%) (Endnote 1).

The Northern Territory also had high offender rates in comparison to other states and territories. In 2008-09, the offender rate in the Northern Territory was 4,832 offenders per 100,000 people aged 10 years and over. In Tasmania, the offender rate was also high with 2,785 offenders per 100,000 people aged 10 years and over.

The Australian Capital Territory had the lowest offender rate of all states and territories (1,096 per 100,000 people aged 10 years and over) in 2008-09.

ENDNOTES

1. The 2008-09 Crime Victimisation Survey was conducted in both urban and rural areas in all states and territories, but excluded people living in very remote parts of Australia. The exclusion of these people is expected to have only a minor impact on any aggregate estimates that are produced for individual states and territories, except in the Northern Territory where such people account for around 23% of the population.

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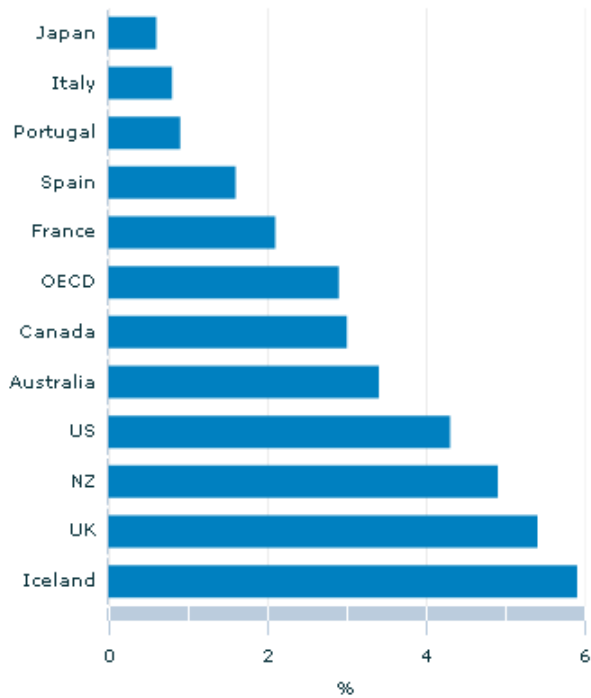
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Crime

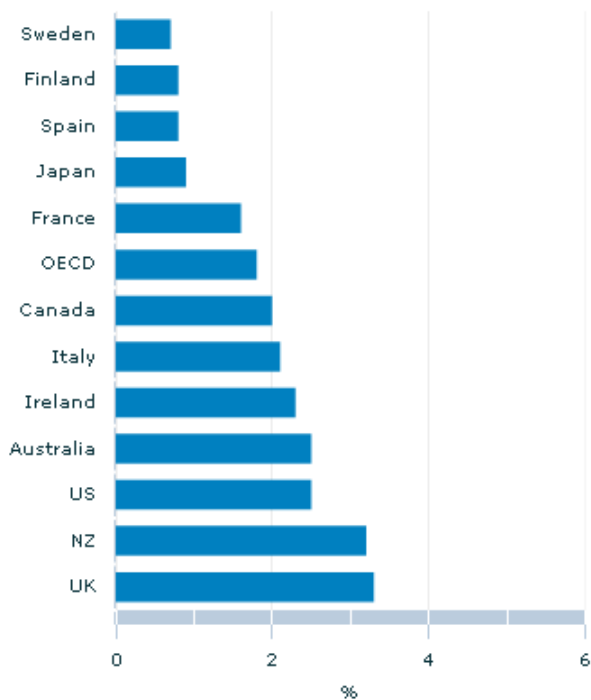
Assaults or threats(a)(b) - 2005(c)



Footnote(s): (a) Victimisation rates. (b) One year prevalence among the entire population. (c) Data refers to surveys undertaken in either 2004 or 2005.

Source(s): OECD Victimisation rates, OECD Factbook 2009

Burglary with entry(a)(b) - 2005(c)



Footnote(s): (a) Victimisation rates. (b) One year prevalence among the entire population. (c) Data refers to surveys undertaken in either 2004 or 2005.

Source(s): OECD Victimisation rates, OECD Factbook 2009

INTERNATIONAL COMPARISONS

Household victimisation surveys are run in many countries and aim to enhance the comparability of crime statistics. International comparability based on police statistics alone is insufficient due to cross-country differences in reporting practices (OECD 2010).

In 2005, Australia had the 9th highest victimisation rate for assaults or threats (3.4%) amongst OECD countries for which data are available (the OECD average was 2.9%). Iceland and the United Kingdom had the highest victimisation rates (5.9% and 5.4% respectively) whilst Italy, Japan and Portugal all had rates below 1.0%.

For burglary with entry in 2005, Australia was ranked equal 5th highest alongside the United States at 2.5% amongst OECD countries. The United Kingdom and New Zealand had the highest victimisation rates at 3.3% and 3.2% respectively and the OECD average was 1.8%. Some of the OECD countries with the lowest burglary victimisation rates included Austria, Germany and Japan (all 0.9%), Finland and Spain (0.8%) and Sweden (0.7%).

Since 2000, the overall victimisation rates have fallen in 18 out of the 20 OECD countries for which information is available, including Australia (OECD 2010).

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LINKS TO OTHER DIMENSIONS OF PROGRESS

In the absence of clear evidence one can only speculate as to whether changes in crime rates have been associated with other indicators of progress presented in this publication. When comparing crime rates among population subgroups, it appears that there are strong links to levels of economic hardship. However, the effect of changes in levels of economic hardship on crime may be indirect, for example, by disrupting the parenting process and increasing the likelihood of neglect and abuse of children, making them more susceptible to the influence of delinquent peers (Weatherburn, Lind & Ku, 2001). However, a large body of evidence suggests that the association between crime rates and changes in unemployment over time is inconsistent.

Drug addiction, a major health concern, is also associated with criminal activity, both in terms of dealing with prohibited drugs and in terms of people committing other crimes to support what can be expensive drug habits. To the extent that the prevalence of crime affects people's trust of others there may also be a link between crime rates and levels of social cohesion.

See also the sections linked below.

RELATED PAGES

- [Work](#)
- [Household economic wellbeing](#)
- [Family community and social cohesion](#)
- [Education and training](#)

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CRIME GLOSSARY

Age

Of the person at the time of the survey interview.

Age standardisation

A statistical method that adjusts crude rates to account for age differences between populations with different age structures.

Alone

The definition of this term was left to the interpretation of the respondent. However, if respondents queried whether having a baby, young child (under 12 years of age) or pet at home was the same as being alone, they were informed that it was.

Assault

Assault is comprised of physical assault and threatened assault (definitions below).

Attempted break-in

An incident where an attempt was made to break into the respondent's home, garage or shed.

- Includes incidents where the respondent (or another person) saw someone acting suspiciously around the property if it was suspected that his or her intent was to steal property.
- Excludes any attempted break-in that resulted in an actual break-in (e.g. attempted to break in through a door but then gained entry through a window).
- Also excludes attempted break-ins to a respondent's car.

Break-in

An incident where the respondent's home (primary residence) was broken into. Includes break-ins to garage, shed or any detached secure building such as games/hobby room etc. Caravans were only included if it was the respondent's permanent residence. Break-in incidents relating to a respondent's car or front or rear yard were excluded.

Cannabis Expiation Notices (CEN) - South Australia

Data relating to offenders issued with Cannabis Expiation Notices (CEN), relating to illicit drug offences, are stored on a separate infringements database and this information cannot be linked to other databases that store information about offenders who were proceeded against by police. Offenders with CENs are effectively assigned a principal offence of illicit drugs. As offenders cannot be linked across the databases, if an offender has committed an offence in addition to a CEN then that offender may be counted as two separate offenders (i.e. counted twice).

Country of birth

Country of birth has been classified according to the *Standard Australian Classification of Countries (SACC), 1998 (Revision 2.03)* (cat. no. 1269.0). Main English speaking countries include Canada, Republic of Ireland, New Zealand, South Africa, United Kingdom and United States of America.

Face-to-face threatened assault

See 'Threatened assault'.

Feelings of safety

Relates to people's feelings of safety in selected situations when they are alone. If a person had a young child with them or a pet they were treated as being alone. Questions about feelings of safety were asked of all respondents aged 18 years or over, and of all 15 to 17 year olds where a parent/guardian gave permission for a personal interview.

General Expiation Notices (GEN) - South Australia

General Expiation Notices (GEN), usually issued for public order and justice offences, are stored in an infringement database and cannot be linked with other police databases that contain information about offender who were proceeded against by police. As offenders cannot be linked across the databases, if an offender has committed an offence in addition to a GEN then that offender may be counted as two separate offenders (i.e. counted twice).

Household

A group of people resident in a private dwelling who share common facilities and meals and who consider themselves to be a household. It is possible for a dwelling to contain more than one household, for example, where regular provision is made for groups to take meals separately and where people consider their households to be separate.

Household crime

Specifically, a break-in, attempted break-in, motor vehicle theft, theft from a motor vehicle, incident of malicious property damage, or other theft, in which a household is considered to be the victim of the crime.

Imprisonment rates

Imprisonment rates enable comparison of prisoner populations across states and territories at a point in time, as well as over time. Prisoner rates are expressed as the number of persons in prison per 100,000 adult population.

Incident

A single occurrence of a crime event, such as a break-in, attempted break-in, theft of a motor vehicle, or act of robbery, assault or sexual assault. Single respondents can report multiple incidents, which means the total number of victims and total number of incidents may differ.

Infringement notices (Victoria)

A two-year trial Infringement Notice Project commenced in Victoria Police in July 2008 following the introduction of the Infringements and Other Acts Amendment Act 2008. It listed a number of additional offences which were able to be dealt with by way of an infringement notice by police. In addition, police had the ability to issue new official warning notices for most offences in the trial. The offences included: failure of a person who is drunk to leave a licensed premises when requested; consuming or having liquor on unlicensed premises; shop theft under \$600; wilful damage; indecent / obscene language; and offensive behaviour.

Victoria has a lower rate of public order offences, property damage and environmental pollution, and offences against justice than most other jurisdictions as the above Victorian penalty/infringement notices are not included in data for this collection. These data are not included as the data resides with a third party (not Victoria Police) and are unable to be matched with offender data maintained by Victoria Police. Offender counts and rates for Victoria are underestimated as a result and caution should be exercised when comparing these offence types with other jurisdictions. Victorian traffic offence data are also maintained by an external party and are not available.

Malicious property damage

Intentional or wilful (not accidental) damage, defacement or destruction of any part of the respondent's

home or anything usually kept at his or her home. The questions on malicious property damage relate to the respondent's home and any property belonging to the respondent or a member of his or her household, excluding any rental, investment or holiday properties that he or she owns. Property is something tangible in nature including land, conveyances, animals or other objects capable of being privately owned. Destruction can mean any alteration that may render something imperfect or inoperative. It can include destruction of property, graffiti or vandalism, partial destruction, killing or harming an owned animal, and removing or destroying a plant or other part of an owned landscape. Excludes turning off water meters and flicking safety switches etc. if no damage to the meter occurred.

Motor vehicle theft

An incident where a motor vehicle was stolen from any member of the household. Includes cars, utes, motorcycles, buses and trucks. Excludes boats and trailers. Only includes vehicles where the primary use is for private purposes (i.e. excludes commercial vehicles). Motor vehicle theft incidents are collected as household-level data.

Neighbourhood

The definition of this term was left to the interpretation of respondents. It can be the street they live in or include the whole suburb they live in.

Non face-to-face threatened assault

See 'Threatened assault'.

Non-victim

A household or person that has not reported at least one of the crimes surveyed.

OECD

Organisation for Economic Co-operation and Development.

Offenders of crime

A person aged 10 years and over allegedly involved in a criminal incident who is proceeded against and recorded by police for one or more offences. An offender is only counted once during the reference period irrespective of the number of offences committed or the number of separate occasions that police proceeded against that offender.

Offender rates

Offender rates are expressed as the number of offenders per 100,000 of the relevant Estimated Resident Population (ERP).

Other theft

Any unlawful taking or obtaining of money or goods other than from motor vehicles owned by the respondent or a household member, without the use of force, threat of force or violence, coercion or deception, with the intent to permanently deprive the owner or possessor of the use of the money or goods. Includes any theft of property belonging to a respondent or a member of the respondent's household not mentioned previously in the survey by the respondent. Includes property belonging to a household member stolen from a vehicle not owned by a household member. Also includes property stolen from a yard or garden (e.g. statues, plants). Excludes any incidents involving theft covered in other sections of the survey such as break-ins or robberies. Other theft incidents are collected as household-level data.

Personal crime

Specifically, a robbery, physical assault, threatened assault or sexual assault, in which an individual is considered to be the victim of the crime.

Physical assault

An incident where anyone used physical force or violence against a respondent. Physical force or violence includes being: pushed, grabbed, shoved, slapped, hit with an open hand or fist, kicked or bitten. It also includes being hit with something else that could hurt a respondent i.e. a bat, hammer, belt, pot, ruler, etc. It includes being beaten, choked, stabbed, shot, burnt, dragged or hit deliberately by a vehicle. Includes assault in a respondent's line of work. It excludes incidents that occurred during the course of play on a sporting field, verbal abuse, and incidents of sexual assault or threatened sexual assault which also involved physical assault.

Police proceeding

A proceeding is a legal action initiated against an alleged offender for an offence(s). Police proceedings represent a count for each separate occasion on which police initiate a legal action against an offender. Each proceeding is classified to a principal offence and principal method of proceeding. It does not represent a count of offences.

Police proceedings - court actions

A type of legal action initiated by police against an offender. Court actions largely comprise the laying of charges against an alleged offender that must be answered in court. Offenders may be taken into custody, granted bail or issued with a summons for these charges pending an appearance in court.

Police proceedings - non-court actions

A type of legal action initiated by police against an offender. Non-court actions comprise legal actions such as informal or formal cautions/warnings, conferencing, counselling such as drug diversionary schemes, or the issuing of penalty or infringement notices, which do not require an appearance in court.

Public transport

Includes buses, trains, trams, ferries and taxis.

Reporting rate

The proportion of victims who reported the most recent incident of a crime to police.

Robbery

An incident where someone stole (or tried to steal) property from a respondent by physically attacking them or threatening him or her with force or violence. Includes incidents of physical assault and threatened assault which also involved robbery or attempted robbery.

Sexual assault

The definition of sexual assault was left to the interpretation of the respondent for the Crime Victimization Survey. Only people aged 18 years and over were asked questions about sexual assault.

Theft from a motor vehicle

An incident where property owned by a respondent or any member of that respondent's household was stolen from a motor vehicle owned by that respondent or any member of that respondent's household for private use. It includes property owned by a respondent or another member of a respondent's household that was in a vehicle owned by the respondent or a household member when that vehicle was stolen, in instances where the property was never returned.

It excludes property stolen that belonged to someone not living in the household (e.g. friend, other relative), and property owned by a business/employer (e.g. computer, mobile phone, work tools). Also excludes property stolen from commercial vehicles (this includes a self-employed business operator whose vehicle is mainly used for work purposes), and any break-in to a motor vehicle if nothing was

stolen. Incidents of theft from a motor vehicle are collected as household-level data.

Threatened assault

Includes any verbal and/or physical intent or suggestion of intent to inflict physical harm, which the person believed was able and likely to be carried out. Includes a threat or attempt to hit with a fist or anything else that could hurt, threats or attempts to slap, punch, spank or hit in any way with a fist or weapon such as a bat, hammer or pot, situations where a gun was left in an obvious place or if the person knew that the perpetrator had access to a gun. Includes toy guns, starter pistols etc. if the respondent believed they were real. Also includes incidents where a respondent was threatened in their line of work (e.g. while working as a security guard).

Includes both face-to-face and non face-to-face threatened assault.

Unemployed

People aged 15 years or over who were not employed during the reference week, and:

- had actively looked for full-time or part-time work at any time in the four weeks up to the end of the reference week and were available for work in the reference week;
- or were waiting to start a new job within four weeks from the end of the reference week and could have started in the reference week if the job had been available then.

Using and waiting for public transport alone after dark

Includes using and waiting for buses, trains, trams, taxis and ferries.

Victim

A household or person reporting at least one of the crimes surveyed. Victims were counted once only for each type of crime, regardless of the number of incidents of that type.

Victimisation rate

The total number of victims of a given crime in a given population (who have been a victim of the crime at least once in the reference period) expressed as a percentage of that population. This is the most common measure derived from crime victim surveys.

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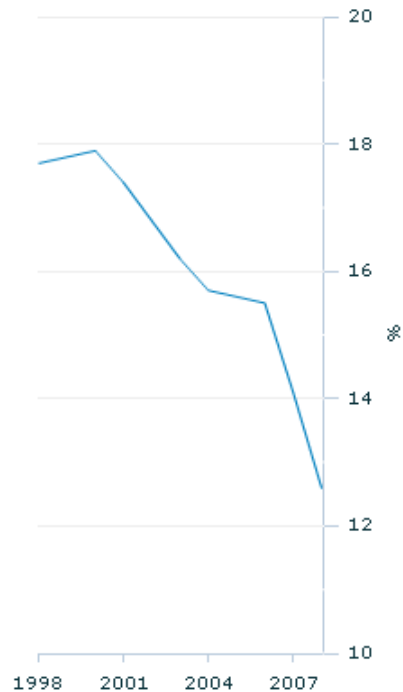
Family, community & social cohesion

Family and community and social cohesion are important aspects of Australian life. However, there is no one summary measure that adequately captures the way that family and community contribute to progress, nor an agreed summary measure of social cohesion. This commentary therefore presents a number of supplementary indicators to illustrate aspects of family and community life in Australia, particularly measures that may contribute to social cohesion.

These indicators show that:

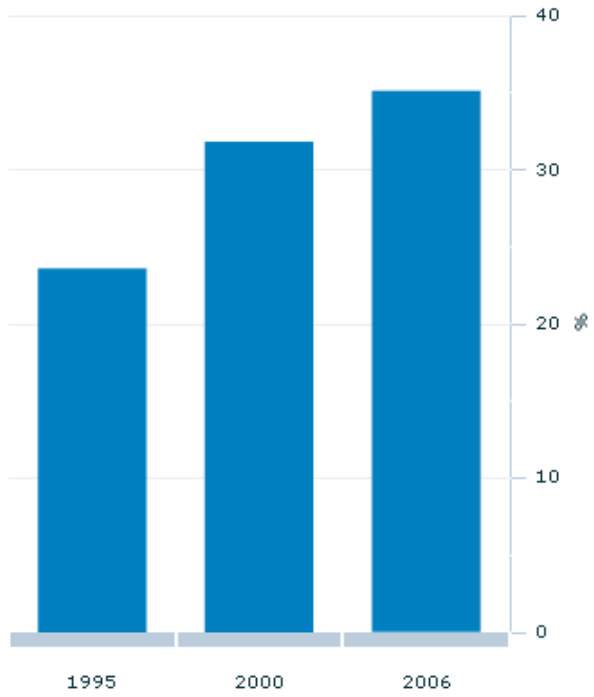
- After rising to 18% in the late 1990s, the proportion of children living without an employed parent in their household subsequently declined to 13% by 2007-08
- Since 1995 the proportion of the population aged 18 years and over who volunteered in the previous 12 months rose by about 50% to reach 34%
- The suicide crude death rate for both males and females has fallen between 1998 and 2008, from 23 to 16 deaths per 100,000 males; and 5.7 to 4.5 deaths per 100,000 females.

Children without an employed parent

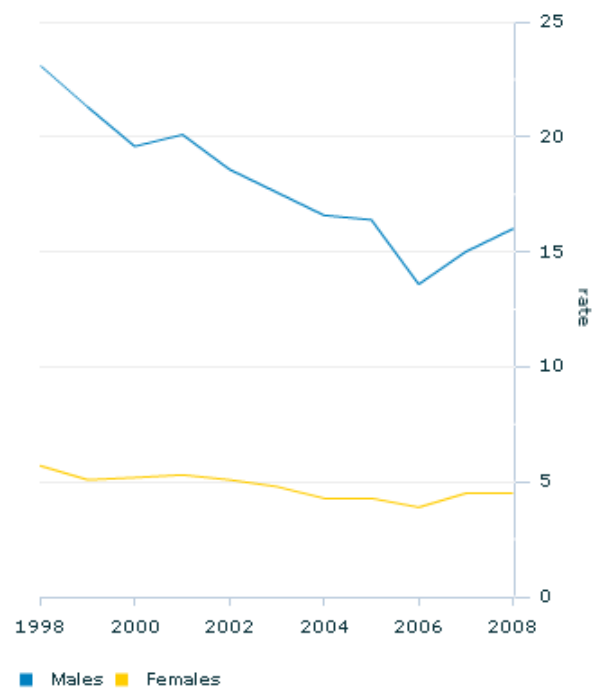




Adult volunteers



Suicide rate



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FAMILY, COMMUNITY, SOCIAL COHESION AND PROGRESS

People are social beings. They require love, companionship and engagement with others to flourish. The absence of family, friendship or other caring or cooperative social relationships at any stage of life, but particularly when people are least able to care for themselves, can have a serious impact on personal wellbeing as well as on wider social cohesion. There are often high costs to the wider community associated with assisting people with poor or broken social relationships.

Closely bonded groups help build social cohesion as the individuals involved are likely to trust one another, share values and provide each other with material and emotional support. Reciprocal relationships in particular, where there is an expectation that support given will be returned, may encourage people to behave more cooperatively. A strongly reciprocal society not only encourages caring, but also supports the sharing of knowledge and ideas between individuals, groups and communities. Groups, clubs and charitable organisations provide a vast range of services that are a crucial adjunct to the role of the family. Where the scale and complexity of the service is beyond that which families or communities can provide, some community support functions are provided by governments.

While views about ideal levels of social cohesion may vary, for some aspects of social cohesion there is likely to be general agreement that change in a particular direction indicates progress or regress. For example, most would agree that decreases in the rate of suicides or drug-induced deaths represent improvements. However, while many statistical measures reflect care and support in families, community cohesion and social capital, it is difficult to pinpoint one or two indicators that summarise progress in this dimension. The commentary therefore presents a range of measures that provide insight into whether family and community life and social cohesion are improving in Australia. The measures include the proportion of children who live in households without an employed parent, the proportion of the adult population who volunteer, suicide rates, and drug-induced death rates.

The section 'A picture of Australian families and communities' presents information about how families and communities in Australia have changed over the past few decades, and how this may have impacted on changes observed in the progress indicators.

Some key outcomes of family and community life, such as whether people are participating in sporting and social events, are able to avoid involvement in criminal behaviour, or achieve good educational and work outcomes, are covered in other sections (Culture and leisure, Crime, Work, and Education and training).

For a full list of definitions used in Family, community and social cohesion, please see the Family, community and social cohesion glossary.

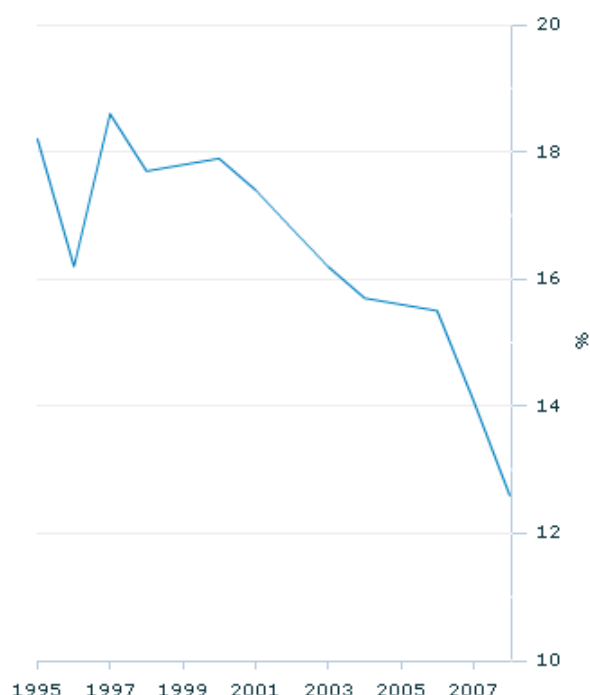
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Children without an employed parent(a)(b)



Footnote(s): (a) Children aged under 15 years. (b) Year ending 30 June. Data has been interpolated for 1999, 2002, 2005 and 2007.

Source(s): ABS data available on request, Survey of Income and Housing

CHILDREN WITHOUT AN EMPLOYED PARENT

Children living without an employed parent in their household may experience financial hardship, and their resident parents' joblessness may affect their long-term personal development.

After rising to 18% in the late 1990s, the proportion of children living without an employed parent in their household subsequently declined to 13% by 2007-08.

In 2007-08, 509,000 children lived without an employed parent in their household, and just under two-thirds (65%) of these children lived with one parent. In over half (58%) of these one parent households, the youngest child was aged under five.

Most children who do not live with an employed parent do live in households where no other person is employed. However, some children may live in households where only other related or unrelated people may be working. These employed people may contribute to the child's economic wellbeing by, for example, contributing to shared living costs. They may also offer a role model for the child in terms of work ethic and social responsibility. In 2007-08, around 14% of families without an employed parent lived in households where someone else was employed. Most of these families (around 82%) were one parent families (ABS 2009a).

While studies point to a higher incidence of poor outcomes for children from jobless households, results do not suggest simple causal relationships. There are complex interactions between a child's inherited capabilities, the care they receive, their role models, education, health, and income, and while adverse

childhood experiences may increase the risk of longer term disadvantage, such experiences do not necessarily result in adverse outcomes.

Longer term adverse effects on children are likely to be greater if the period of parental or household joblessness is extended, and may differ depending on circumstances. For example, if a parent is studying rather than working, the role model for the child is positive and the household's economic wellbeing may improve later on.

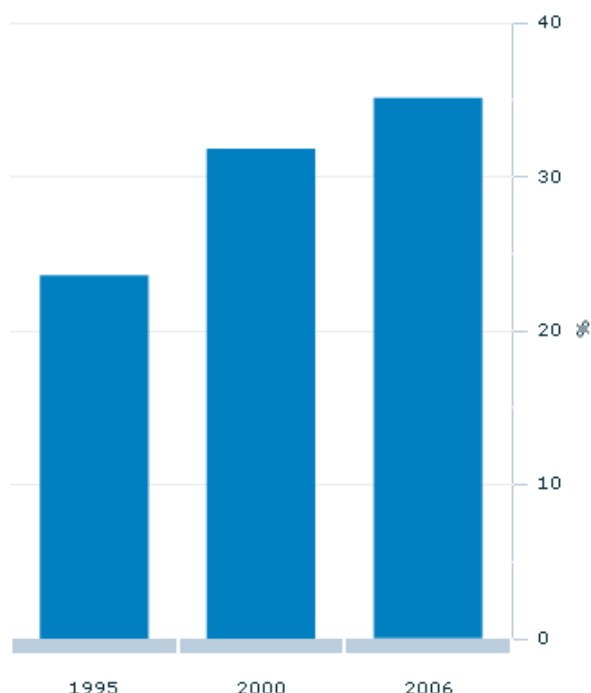
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Adult volunteers(a)(b)



Footnote(s): (a) In the 12 months prior to interview. Proportion of all people aged 18 years and over. (b) 2006 data are shown on the same basis as 1995 and 2000 data, without the four new conditions associated with the 'willingly undertaken' criterion being applied.

Source(s): ABS Voluntary Work, Australia, 2006 (cat. no. 4441.0)

ADULT VOLUNTEERS

Willingly giving time to do work for an organisation or community group on an unpaid basis can be rewarding for individuals, and it can extend and enhance their social networks. For example, volunteering may be the basis of relationships between community members who do not normally associate with one another.

Since 1995, the proportion of the adult population (aged 18 years and over) who 'volunteered' in the previous 12 months increased from 24% to 35% in 2006 (Endnote 1).

ENDNOTES

1. In 2006, changes were made to the definition of volunteers to ensure that they undertook the voluntary work willingly. This meant that some activities, such as Work for the Dole Program or student placement, while recognised as unpaid community work, were not strictly voluntary or would not normally be seen as voluntary work, and so were excluded from the definition. The result this change had on the data for 2006 is quite small. The proportion of adults who volunteered changed from 35% to 34%, or from 5.4 million people aged 18 years and over to 5.2 million people.

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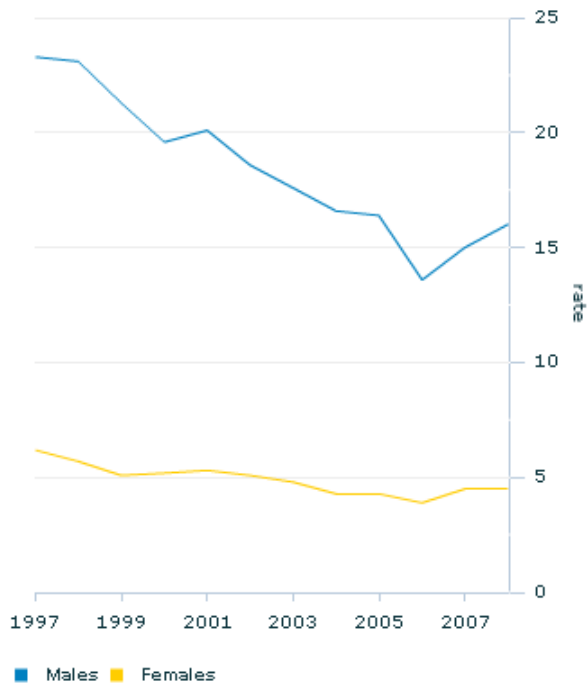
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Family, community & social cohesion

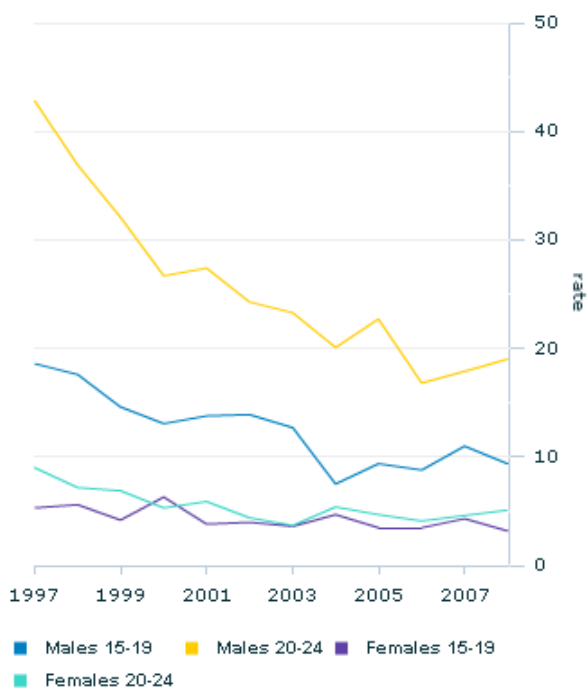
Suicide rate(a)



Footnote(s): (a) Crude death rate per 100,000 estimated resident population as at 30 June.

Source(s): ABS 2010, Causes of Death, 2008 (cat. no. 3303.0)

Youth suicide rate(a)



Footnote(s): (a) Crude death rate per 100,000 estimated resident population as at 30 June.

Source(s): ABS 2010, Causes of Death, 2008 and 2006 (cat. no. 3303.0)

SUICIDE

The suicide rate is a widely used indicator of social cohesion, as is the prevalence of drug-induced deaths. While such deaths can occur for many reasons, and many complex factors might influence a person's decision to suicide, these preventable deaths point to individuals who may be less connected to support networks (OECD 2001a). For instance, they may be less inclined to seek help or may be less intimately connected to people who might otherwise be aware of problems or step in to assist.

Men suicide at a higher rate than women, and the male suicide rate is more volatile than that for females. The male suicide rate has declined gradually over the last decade and was at 16 deaths per 100,000 males in 2008. The female rate has remained at around five deaths per 100,000 females since the late 1990s, declining gradually from six per 100,000 females in 1997.

Young men suicide at a higher rate than young females. In 2008, men aged 20-24 years were particularly vulnerable to suicide, with a rate of around 19 suicides per 100,000 males in 2008. This is a higher rate than for young men aged 15-19 years (around 9 suicides per 100,000 men) or for young women (3 suicides per 100,000 women aged 15-19 years and 5 per 100,000 women aged 20-24 years).

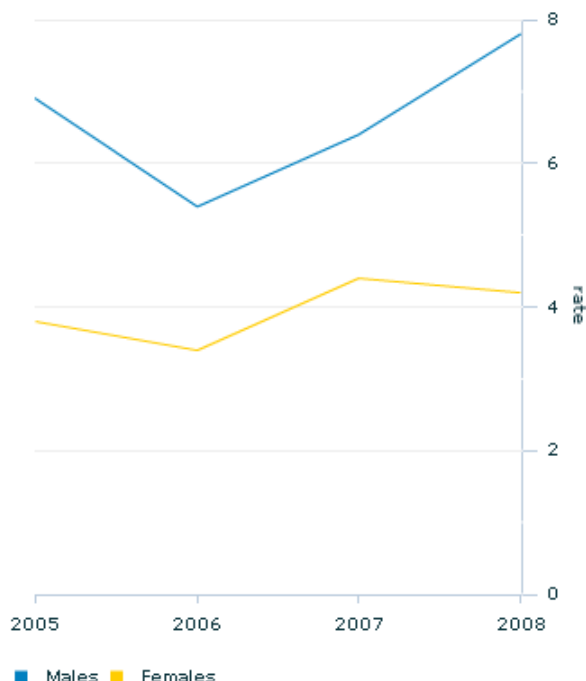
Of all people, middle aged men and older men suicide at the highest rate. In 2008, men aged 40-44 years had the highest suicide rate at just over 26 deaths per 100,000 males. Men aged 85 years and over also had a suicide rate of 26 deaths per 100,000 males.

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Drug-induced death rate(a)



Footnote(s): (a) Age standardised to the 2001 Australian population, per 100,000 people.

Source(s): ABS data available on request, Causes of Death Collection

DRUG-INDUCED DEATHS

Drug-induced deaths are mostly due to the use of opiates such as heroin, and can reflect the fact that some individuals may not be well integrated into a supportive community. It can also reflect the levels of crime and illicit drug use in the community.

As with suicide, the drug-induced death rate for women has been relatively low and stable over recent years (around four per 100,000 women since 2005) compared with the rate for men. For men, the rate rose from around seven per 100,000 men in 2005, to close to eight deaths per 100,000 men in 2008.

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A PICTURE OF AUSTRALIAN FAMILIES AND COMMUNITIES

An individual's family is often their fundamental source of emotional, physical and financial care and support. Support is usually provided by related people who live in the same house - fathers, mothers, partners and siblings. Families provide the nurturing setting in which children grow to become socially responsible adults, and where individuals gain a sense of belonging. The family's role in providing guidance on social values is at the basis of civil society.

Like families, communities are an important source of support and care for individuals, and individuals can gain a sense of identity and security from belonging to a community. Day-to-day interactions between people in a community build trust and reciprocity: the strength of a society's community bonds often determines its resilience and cohesion. Communities can also offer a vast range of services provided by groups, clubs and charitable organisations, which are a crucial adjunct to the institutional care provided by governments.

People's relationships and bonds with one another through family and the community, together with their shared values, contribute to social cohesion. A cohesive society is one in which families and communities are strong and inclusive and where fewer people fall through the cracks.

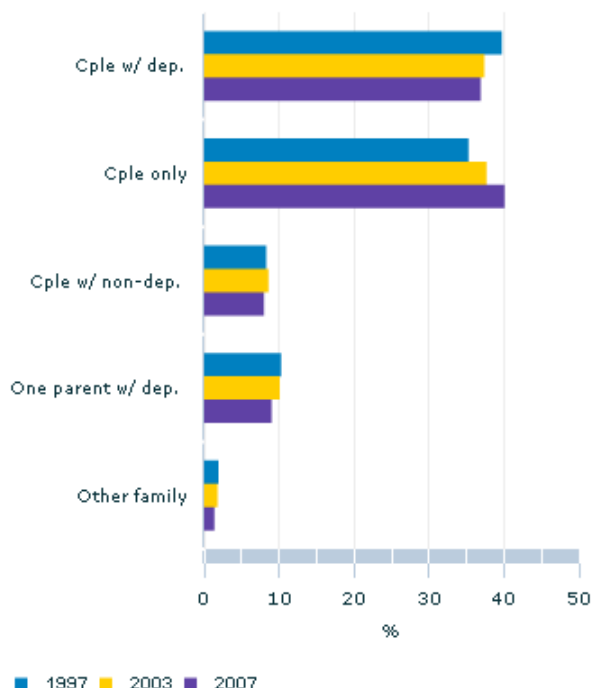
Information included in the following sections provides a picture of Australian families and communities. The issues explored include changing family structures, family stress, caring for the elderly and disabled, contact with family, friends and social networks, and homelessness.

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Selected family types(a)



Footnote(s): (a) Proportion of all families.

Source(s): ABS Family Characteristics and Transitions, Australia, 2006-07 (cat. no. 4442.0)

FAMILY STRUCTURE

Families have long been viewed as the core social unit that maintains people's welfare. Over recent decades there have been extensive changes in the way that families are structured and function. Research and policy interest has shifted from maintaining the so-called ideal or traditional family form (a married couple and their children) to improving the quality of relationships between family members, irrespective of form. Some of this change is also reflective of changing demographics - as the population ages and fertility rates have declined over the long term, there are more couple only and lone person households, regardless of social trends. Other changes in family composition represent choices made by family members, including that of achieving better functioning family structures. For many members of the community, new and emerging forms of family structure represent progress in increasing the care, safety and support available to vulnerable Australians. Yet, for those members of the community who hold traditional values, the decline of traditional family structures may be viewed as regress.

In 2006-07, couple families with no children were the most common type of family (40%), followed by couple families with dependent children (37%). This was the reverse of the situation in 1997 where couple families with dependent children were the most common (40%), followed by couple families with no children (35%). The increase in the proportion of couples living without children partly reflects the ageing of the population as baby boomers move into the 'empty nester' phase of their lives.

The proportion of one parent families with dependent children remained steady, at around 10%, between 1997 and 2006-07. Lone parents are more likely to be disadvantaged in a number of areas. They have higher levels of unemployment, in part due to caring responsibilities, and are more likely to experience financial hardship. Their lone adult circumstances also increases the risk of some other forms of disadvantage. For example, in the 2006 General Social Survey, people in one parent families were victims

of an assault (25%) or break-in (17%) at rates similar to other lone adult households of comparable age, which is much higher than the rates experienced by people in couple families (10% and 9% respectively). For some, the transition from couple to one parent family can result in improvements to the safety, emotional and financial circumstances of the individuals involved that outweigh other risks.

The ageing of the population, combined with the fact most women tend to marry older men and have longer life expectancies, is reflected in the larger number and proportion of older women living alone, compared with older men. In 2006-07, women aged 65 years and over were more likely than men of the same age to live alone (35% compared with 17%) and women aged 85 years and over were more likely to live alone than men of the same age (50% compared with 22%). The number of people living alone is projected to increase significantly into the future. In 2006, there were 1.9 million people living alone in Australia; by 2031 it is projected that between 3.0 million and 3.6 million people will be living alone (ABS 2010a).

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FAMILY STRESSES

Families and communities play a key role in raising capable, functioning people. However, there are a number of stresses that can threaten the optimal functioning of the family unit. These include: time stress, financial stress, parental mental health and substance abuse which can threaten family cohesion. These, in turn, may reflect or result in poor quality parent-child relationships (both resident and non-resident), conflict between parent figures and between parents and children, and abuse or neglect of children.

In the 2006 Longitudinal Study of Australia's Children, most parents reported high levels of family cohesion when rating their family's ability to get along with one another (on a five point scale from 'poor' to 'excellent'). The majority (95%) of families with children aged 2-3 years, and 93% of families with children aged 6-7 years, reported 'excellent,' 'very good' or 'good' levels of family cohesion.

Feeling pressed for time can also add stress to family life. Over two-thirds (67%) of mothers living in a couple relationship with a child under 15 years reported always or often feeling rushed or pressed for time in 2006, compared to 61% of fathers in the same family type. Similarly, both females and males in one parent families with children under 15 reported high levels of always or often feeling rushed or pressed for time (61% and around 52% respectively). For partners in a couple family with no children, the proportion who always or often felt rushed or pressed for time was considerably lower: 34% for men and 37% for women (ABS 2008).

Raising children is a complex job, and if one or both parents suffer illness or psychological distress, this may result in poor outcomes for children (Silburn et al 1996). In 2007-08, 12% of mothers and 9% of fathers in couple families reported high or very high psychological distress. While some mothers with very young children suffer post-natal depression, the proportion of mothers with children younger than five reporting high or very high psychological distress was the same as that for mothers with children aged 10-14 (around 17%). However, the proportion of lone mothers reporting high or very high psychological distress was almost double that of mothers in couple families (22% compared with 12%).

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CARING FOR THE ELDERLY AND DISABLED

People who provide care outside of institutions to people with disabilities and long-term health conditions, and to those who are frail or aged, perform an important service. Unpaid informal carers provide services that might otherwise cost over \$30 billion annually (Access Economics 2005).

In 1998, around 450,900 Australians were primary carers for people with long term health conditions, or were frail or aged. By 2003, this had increased, by 5%, to 474,600 people, growing much more slowly than both the overall population and the aged. The primary caring role most often falls to immediate family, with the vast majority (91%) of primary carers being either a partner, parent or child. Most of these carers (78%) lived with the person needing care. While many husbands, fathers and sons provide care, in 2003, 71% of primary carers were women.

Primary carers of the elderly and disabled, 2003

Relationship to recipient	Recipient of care	no.	% change since 1998
Wife	Lives with	114,700	9
Husband	Lives with	81,000	-5
Mother	Lives with	88,600	8
Daughter	Does not live with	47,400	-1
Daughter	Lives with	40,200	10
Son	Lives with	18,800	23
Son	Does not live with	16,200	31
Other female relatives	Does not live with	15,000	-12
Other female relatives	Lives with	11,700	-2
Father	Lives with	7,300	-30
Total(a)		474,600	5

(a) Total includes friends or neighbours and other male relatives.

Source: ABS data available on request, 1998 and 2003 Survey of Disability, Ageing and Carers

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CONTACT WITH FAMILY, FRIENDS AND SOCIAL NETWORKS

High quality relationships with close family members and friends may have positive health benefits, such as greater longevity. In addition, people with wide social networks may have good outcomes in other aspects of life such as employment. Social networks also benefit the community as a whole, and interactions between people to maintain these networks (especially when they are reciprocal) contribute to social cohesion. Local communities, workplaces, schools and voluntary organisations play an important role in creating more formal social networks by bringing a diverse range of people together for a common purpose.

Some people may not join networks or groups because they feel marginalised. Others may be isolated through the loss or absence of a significant relationship. Where people are not part of social networks, they may experience loneliness and be more vulnerable.

In 2006, most adults aged 18 years and over (96%) reported having contact with family or friends outside their household in the previous week, either in person or via telephone, mail or email. There was little variation in this proportion between men and women.

Most adults (93%) also felt they could ask people outside their household for small favours, such as looking after pets, collecting mail, watering gardens, minding a child for a brief period, or borrowing equipment. Again there was little difference between men and women.

Similarly, 93% of adults reported they would be able to access support from outside the household in times of crisis. The greatest source of potential support were family members (80% of adults thought their family would help), followed by friends (67%). Patterns for having contact with family and friends, and being able to ask for small favours and outside support, were very similar in 2002.

More people are living alone, and between 1989 and 2009, the proportion of people (aged 15 years and over) living alone in private dwellings, increased from 9% to 12% (ABS 2009b). Moreover, the number of people living alone is projected to increase significantly into the future. In 2006, there were 1.9 million people living alone in Australia; by 2031 it is projected that between 3.0 million and 3.6 million people will be living alone (ABS 2010a).

The average waking time that people (aged 15 years and over) spent alone per week increased from just under 18.5 hours to just over 21 hours between 1992 and 1997 but decreased slightly to 19.1 hours in 2006. Increases between 1992 and 2006 occurred across most age groups, but were typically greater among men than women, and greatest among people who lived alone.

Paid employment is an important means of meeting people and developing relationships with a more diverse range of people. As noted in the Work section, there have been changes for both men and women in the proportion of people working (decreasing for men and increasing for women), resulting in women having more work-related social contacts than in the past.

In 2006, people without a job (either unemployed or not in the labour force) were more likely to feel they were not able to ask small favours of people outside the household (11% compared with 5% for employed people). However, there was little difference between the proportion of people with a job and the proportion of people without a job who had contact with friends or family outside the household in the previous week (97% for employed people compared with 95% for those without a job).

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HOMELESSNESS

People who are homeless do not have access to the economic and personal support that a home normally affords. For some people, personal factors and social situations (including family breakdown, unemployment, drug abuse, gambling, mental health problems, domestic violence and poverty) culminate to cause them to become or remain homeless. Homelessness is likely to be an aspect of disadvantage that both derives from, and infers the risk of, many other aspects of disadvantage.

People experiencing homelessness can be in a number of situations including sleeping rough, staying temporarily with friends or relatives, staying in emergency accommodation or hostels, or residing in boarding houses. And these situations may change from night to night. The homeless state may mean not all homeless people are captured in data collections, and furthermore, even when they are, their homeless state might not be obvious and may need to be inferred from other characteristics. As a result, the complexity of measurement has in the past prevented any comprehensive official count.

For one group in the homeless population, information obtained from government-funded specialist homelessness agencies, and compiled by the Australian Institute of Health and Welfare, showed that during the year 2008-09 there were 204,900 people (one in every 105 Australians) who received support at some point during that year. More females (62%) than males (38%) received support, while males were slightly more likely to have repeat periods of homelessness. The most common reason for seeking assistance was due to domestic or family violence (22% of support periods), relationship or family breakdown (10%) and other financial difficulty (8%). Due to changes in data collection methods, these estimates cannot be directly compared with previous years (AIHW 2010).

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CULTURAL ISSUES

One indicator of the breakdown of social cohesion is conflict between people and groups. When this conflict is expressed along racial or cultural lines, it is referred to as racism. Experiences of racism can be at the individual or group level and they can include discrimination and verbal or physical expressions of hostility.

There is debate about the prevalence and nature of racism in Australia. Experiences of racism, racial conflict and discrimination can be reported to the Australian Human Rights Commission and various interest groups. However, these reports are not collated in a systematic or centralised way.

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PROGRESS OF AUSTRALIANS

There are certain groups in Australia, such as children, Aboriginal and Torres Strait Islander people, and migrants, who may experience different outcomes to the rest of Australia in terms of family and community. Children are particularly vulnerable to the impact of family transitions, while migrants may find it difficult to form social networks. Aboriginal and Torres Strait Islander people may experience different degrees of social involvement through complex traditional systems of law and kinship. The following section looks at these three population groups.

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CHILDREN

The wellbeing of children depends to a large extent on the healthy functioning of the family environment. The greater diversity of family types, and the changing nature of family structures, means that many children experience family transitions that may affect their wellbeing. In addition, societal changes such as the increased labour force participation of women mean that many parents are working, and this can affect the amount of time they are able to spend with their children.

Children experiencing family transitions

While some families are able to minimise the impact of divorce or separation on children, and family conflict may sometimes be reduced after these events, adjusting to new family circumstances can take time, and some adults and children remain stressed for years afterwards. Research suggests the risk of poor outcomes is increased for children who experience such family related transitions (Pryor and Rogers 2001). However, other research shows that family features such as warmth, loving care, good parent-child relationships and monitoring children's behaviour are important for outcomes, and these can be largely independent of family structure (Sanson and Lewis 2001).

The proportion of children under 18 years of age who had a natural parent who lived elsewhere, has been fairly stable over the past decade (22% in 2006-07 compared with 21% in 1997). Of those children in this situation in 2006-07, three-quarters lived in one parent families. In 2006-07, 15% of adults had experienced the divorce or separation of parents before the age of 18 years.

Similarly, the proportion of families with children under 18 that were one parent families remained steady between 1997 and 2006-07, at around 20%, and the proportion of intact families with children under 18, also remained fairly stable at around 73%. The proportion of step and blended families was also level at 7% between 1997 and 2006-07.

Time spent with children

Raising children is a time consuming job. In 2006, parents spent 6.4 hours a day on primary and secondary child care activities, which included the physical and emotional care of children, teaching, helping and reprimanding children, playing, reading and talking, minding children and visiting child care establishments or schools. The largest component of this time was child minding (62%). Developmental activities such as playing with children took around one hour on average of a parent's day.

Mothers spent more time on primary and secondary child care activities than fathers: 8.5 hours a day for mothers and about 3.9 hours a day for fathers. While mothers spent 16% of their child care time providing physical and emotional care, fathers spent 9% of their child care time on physical and emotional care.

When mothers work outside the home in paid employment, their contact time with children reduces. In 2006, mothers employed full time spent 56 minutes per day on the physical and emotional care of the children, compared with 1.8 hours for mothers who were not employed. These proportions were similar to those in 1997.

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ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLES

To varying degrees, the relationships formed through complex traditional systems of law and kinship still exist across contemporary Aboriginal and Torres Strait Islander societies. Thus, while Aboriginal and Torres Strait Islander people identify as being culturally distinctive within the wider Australian population, they are also diverse within their own culture. As a result, Aboriginal and Torres Strait Islander people may be part of numerous networks.

Social networks, support and contribution

A person's social network may include friends, family, neighbours or more widely dispersed contacts within a community. A support network consists of the people who they can turn to for help with small favours or routine household tasks, such as feeding pets while away, minding a child for brief periods of time or borrowing tools or equipment. These types of relationships provide an indication of the connectedness within communities.

The ability to get support in a time of crisis means that a person is able to obtain emotional, physical or financial help from someone else during a time of unexpected trouble (eg sudden sickness, death of a partner/spouse, loss of job, fire or flood). In 2008, 89% of Aboriginal and Torres Strait Islander people aged 15 years and over reported that they were able to get support in a time of crisis. This proportion has not changed significantly since 2002 (90%).

Being able to have a say on issues that are important may contribute to a person's sense of social and emotional wellbeing. In 2008, one-quarter (25%) of Aboriginal and Torres Strait Islander people aged 15 years and over felt they were able to have their say within the community on important issues all or most of the time. A similar proportion (23%) felt they could have their say some of the time. However, just over half (52%) felt they could only have their say a little of the time or not at all.

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MIGRANTS

Australia is often described as a 'settlement country' and, in 2009, around one in four Australians were born overseas (ABS 2010b). According to the 2006 Census, 44% of Australians were either born overseas, or had a parent who was.

Over the past century, each wave of immigration has been characterised by a different predominant region of origin, often related to world events of the period (see Population section). Thus, Australian society is made up of a wide range of cultural and linguistic groups, and groups with different religious affiliations.

As well as forming networks with people similar to them, for social cohesion to flourish individuals need to form relationships with people from different backgrounds. However, the ability to participate in Australian society, and form the beneficial social networks discussed elsewhere in this section, is highly dependent on English proficiency.

In 2006, three million people spoke a language other than English as the main language spoken at home. Of these people, nearly three-quarters (74%) were born overseas, and an additional 21% had at least one parent born overseas. In 2006, 1% of the population could not speak English at all.

People born overseas and who were not proficient in English reported in 2006 that they were less likely to be able to get support in a time of crisis from people living outside their household than people born in Australia (76% compared with 95%). They were also more likely to report feeling unsafe or very unsafe at home alone after dark (18% compared with 6% of people born in Australia) and had difficulty getting transport to places they needed to go (11% compared with around 4% of the those born in Australia). They were also less likely to have participated in sport (38% compared with 64%).

Some migrants might be disadvantaged because of the circumstances under which they came to Australia. The humanitarian program brings migrants to Australia on a quota basis and this quota has remained roughly the same between 2003-04 and 2008-09 (around 13,000-14,000 people per year) (DIAC 2010a). Between 2005-06 and 2008-09, the proportion of skilled migrants remained steady at around two-thirds of all settlers. The family stream made up the remaining third over this period (DIAC 2010b). Migrants coming through the humanitarian program tend to have low levels of income, larger families, low levels of education and low levels of English proficiency, while skilled migrants tend to experience better health, education and employment than the general Australian population.

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LINKS TO OTHER DIMENSIONS OF PROGRESS

There are links between work, or a lack of work, and individual, family and community wellbeing. For example, studies generally suggest that unemployment is associated with crime, poorer health, and higher risks of financial hardship. These associations tend to be stronger for those unemployed for longer periods of time. Employment is also important to the wellbeing of the broader community. For example, the underutilisation of labour resources is a lost opportunity for producing goods and services, and unemployment is associated with lower levels of social cohesion. Communities living in areas of low socioeconomic status may experience lower levels of community wellbeing.

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FAMILY, COMMUNITY AND SOCIAL COHESION GLOSSARY

Children without an employed parent

Children aged under 15 years, living in a single or multi-family household, where no parent is employed. Other relatives or non-related individuals living in the household may be employed.

Community

The term community refers to an inter-connected group of people who can influence one another's wellbeing. Notwithstanding the many possible connections between people that may be used to define communities (see below), there is an important sense that the wellbeing of community members is influenced by their connections to others. Like a family, a community may be an important source of support and care for individuals, and individuals can gain a sense of identity and security from belonging to a community.

Communities are commonly thought of as being groups of people living within particular geographic areas. There are other connections between people which are not geographically based but which indicate the existence of communities. These include connections relating to shared values, traditions and lifestyles. Thus, people with a shared culture or heritage such as Aboriginal and Torres Strait Islander people, people belonging to religious groups, or groups of people born in particular countries who maintain associations with each other, are often viewed as belonging to a community. Communities may also be defined in terms of people with a shared set of interests or activities, for example school communities' or 'arts communities'. Thus communities may be composed of diverse groups with competing interests and rights; but they can also be reasonably homogeneous.

Couple family

A family based on two persons who are in a registered or de facto marriage and who are usually resident in the same household. The family may include any number of dependent children, non-dependent children and other related or unrelated individuals. It is not necessary for a parent-child relationship to be formed, thus a couple family can consist of a couple without children present in the household.

Couple family with dependent children

One family household consisting of a couple with at least one dependent child. The household may also include non-dependent children, other relatives and unrelated individuals.

Dependent child

A person aged under 15 years, or a dependent student.

Dependent student

A full-time student aged 15-24 years, living in the same usual residence as his or her natural, step, foster or adoptive parent.

Drug-induced deaths

Any death directly caused by an acute episode of poisoning or toxicity to drugs, including deaths from accidental overdoses, suicide and assault, and any death from an acute condition caused by habitual drug use. The term 'drug' refers to substances classified as drugs that may be used for medicinal or therapeutic purposes and those that produce a psychoactive effect excluding alcohol, tobacco and volatile solvents (e.g. petrol). Drug-induced causes exclude accidents, homicides and other causes indirectly related to drug use. Also excluded are newborn deaths associated with mother's drug use. See Causes of Death, Australia, 2008, Appendix 2 - Tabulation of Selected Causes of Death for the full list of ICD-10 codes

included in this definition of Drug Induced Deaths.

Family

Two or more people, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering, and who are usually resident in the same household. The basis of a family is formed by identifying the presence of a couple relationship, lone parent-child relationship or other blood relationship. Some households will, therefore, contain more than one family.

Homeless

The ABS uses the cultural definition of homelessness. This definition identifies shared community standards about the minimum housing that people have the right to expect, in order to live according to the conventions and expectations in Australia. The minimum community standard is a small rental flat with a bedroom, living room, kitchen, bathroom and an element of security of tenure. The definition identifies those groups that fall below the minimum community standard. These groups include rough sleepers (living on the streets, in deserted buildings, improvised dwellings, in parks, etc), people in emergency accommodation/youth refuges/hostels, people staying temporarily with friends or relatives and people residing in boarding houses.

Household

One or more persons usually resident in the same private dwelling.

Humanitarian program

The Humanitarian program is a component of Australia's immigration program. It has two important functions:

- It fulfils our international obligations by offering protection to people already in Australia who are found to be refugees according to the Refugees Convention (known as the onshore protection/asylum component)
- It expresses our commitment to refugee protection by going beyond these obligations and offering resettlement to people overseas for whom this is the most appropriate option (known as the offshore resettlement component).

For further information visit the Department of Immigration and Citizenship website.

Indigenous

Persons who identify themselves as being of Aboriginal and/or Torres Strait Islander origin.

Intact family

A couple family containing at least one child aged 0-17 years who is the natural or adopted child of both members of the couple, and no child aged 0-17 years who is the step child of either member of the couple. Intact families may also include other children who are not the natural or adopted children or either parent, such as foster children.

Lone parent

A person who has no spouse or partner usually resident in the household but who forms a parent-child relationship with at least one child usually resident in the household.

Migrant

A person who was not born in Australia, arrived in Australia after 1980, was aged 18 years and over on arrival and had obtained permanent Australian resident status.

One parent family with dependent children

A household comprising a lone parent with at least one dependent child. The household may also include non-dependent children, other relatives and unrelated individuals.

Primary carer

A person who is the largest provider of informal assistance, in terms of help or supervision, to a person with one or more disabilities. The assistance has to be ongoing, or likely to be ongoing, for at least six months and be provided for one or more core activities (communication, mobility and self care). In the Survey of Disability, Ageing and Carers, primary carers only include persons aged 15 years and over for whom a personal interview was conducted. Persons aged 15-17 years were only interviewed personally if parental permission was granted.

Reciprocal relationship

A relationship where there is a general expectation that assistance or support given by one party may be returned at some time in the future by the other.

Skilled migration

The Skilled migration program is a component of Australia's immigration program. The Skill Stream of Australia's Migration Program is specifically designed to target migrants who have skills or outstanding abilities that will contribute to the Australian economy. There are four main categories of skilled migrants: general skilled migration, employer nomination, business skills migration and, distinguished talent. For further information visit the Department of Immigration and Citizenship website.

Social capital

Social capital consists of the networks and the shared norms, values and understandings that facilitate cooperation within and among groups. It generally contributes to community strength and is accumulated when people interact with one another, whether informally (for example, with family and friends) or more formally (for example, in groups and organisations in the wider community) (OECD 2001b).

Social cohesion

Social cohesion can be understood as the bonds and relationships people have with their family, friends and the wider community. Day to day interactions between people in a community build trust and reciprocity and contribute to cohesion (Berger-Schmitt and Noll 2000).

Social exclusion

Social exclusion is a form of social disadvantage encompassing economic and non-economic factors. Excluded individuals and groups are separated from institutions and wider society, and consequently from both rights and duties (Jary and Jary 2000).

Social networks

A set of people who have ties between them or some pattern of interaction. Indicators that shed light on aspects of social networks include people's ability to access support, their participation in groups associated with sport and religious activities, and in paid and voluntary work.

Suicide

Any death due to intentional self-harm. In order to classify a death as suicide (intentional self-harm) the ICD-10 interpretation used by the ABS requires that specific documentation from a medical or legal authority be available regarding both the self-inflicted nature and suicidal intent of the incident. The International Classification of Diseases 10th Revision (ICD-10) codes for suicide are X60-X84 and Y870.

Support period

A discrete period of time in which a person receives ongoing support from a specialist homelessness agency.

Volunteer

Someone who willingly gives unpaid help, in the form of time, service or skills, to or through an organisation or group. The reimbursement of expenses in full or part (e.g. token payments) or small gifts (e.g. sports club T-shirts or caps) are not regarded as payment of salary, and people who received these are still included as voluntary workers. However, people who received payment in kind for the work they did (e.g. receiving farm produce as payment for work done on a farm, rather than cash) are not included as volunteers. The Voluntary Work Survey asked about voluntary work done in the 12 months prior to interview, excluding voluntary work done overseas.

For the 2006 voluntary work collection, in consultation with the peak body for volunteer organisations, the 'willingly undertaken' part of the definition was refined by the exclusion of an involvement with an organisation that, while recognised as unpaid community work, was not strictly voluntary or would not normally be seen as voluntary work: the Work for the Dole Program or Community Work under Mutual Obligation; work experience/part of an unpaid work trial; work under a Community Service Order; a student placement; or emergency work during an industrial dispute.

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- [Family community and social cohesion glossary](#)

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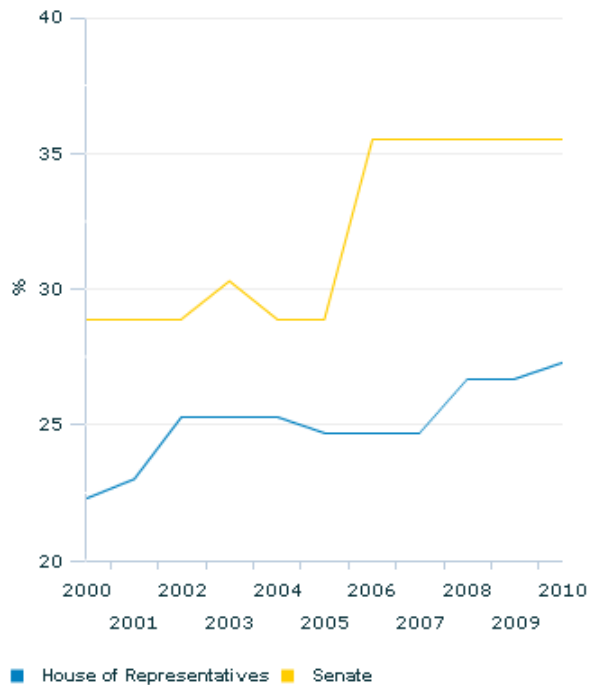
Democracy, governance & citizenship

While democracy, governance and citizenship is a headline dimension for assessing whether life in Australia is getting better, it is difficult to find a single indicator that adequately captures the wide range of aspects that this dimension includes.

There are, however, a number of supplementary progress indicators that can indicate progress in a number of facets of this broad dimension of Australian life, and four are listed below.

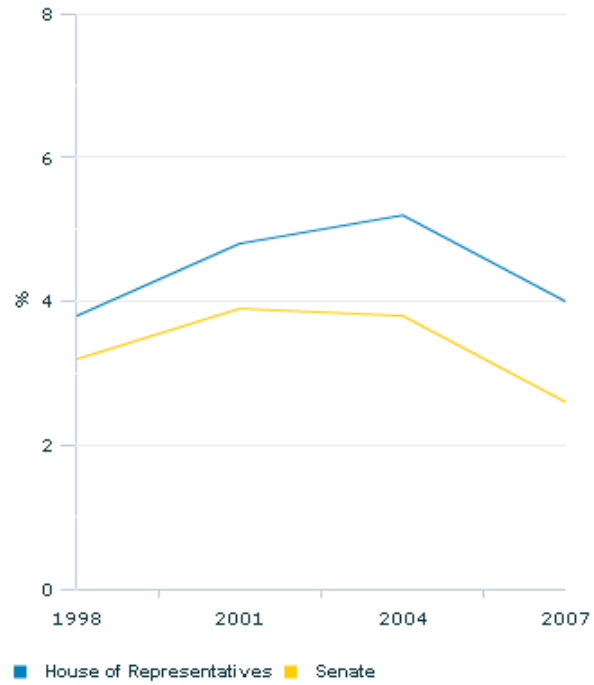
- Between 2000 and 2010 the proportion of federal parliamentarians who are women increased: in the Senate the proportion rose from 29% to 36%; and in the House of Representatives it rose from 22% to 27%.
- In the 10 years to 2007 the proportion of informal votes in federal elections fluctuated between 4% and 5% for the House of Representatives and was slightly lower for the Senate.
- In 2008, 11% of ASX200 company executive managers were women, a decline from 12% in 2006 but an increase from 8% in 2002.

Federal parliamentarians who are women

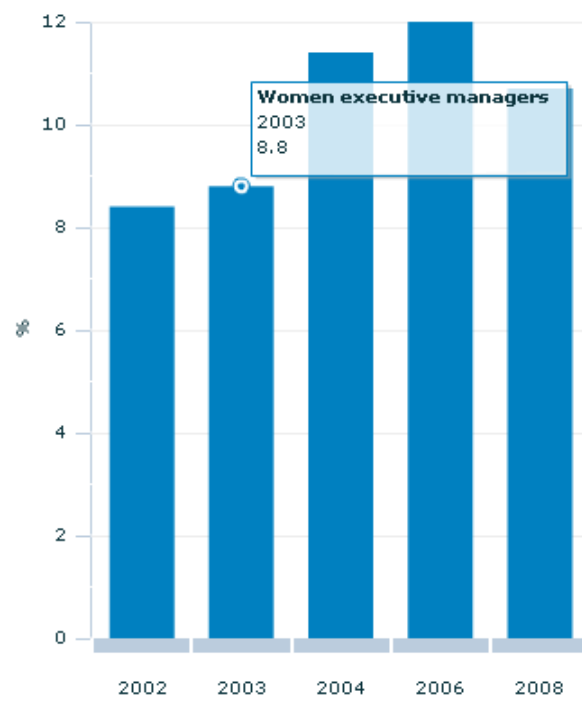




Informal votes in Australian federal elections



Executive managers of ASX200 companies who are women



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DEMOCRACY, GOVERNANCE AND CITIZENSHIP AND PROGRESS

The wellbeing of society depends not only on the wellbeing of individual citizens, but also on the quality of our collective public life: on factors such as the fairness of our political system, the health of our democracy and the participation of citizens in public life.

Democratic government has been characterised as having two underlying principles:

- popular control over public decision making and decision makers through democratic elections, and
- equality between citizens in the exercise of that decision making.

But many other factors reflect the strength and health of democracy in practice: the effectiveness of political institutions such as Parliament, the fairness of elections, the existence of an independent judiciary, equal laws and a free press (IDEA 2001). Other important factors include the confidence citizens have in government and public institutions, and the extent to which citizens participate in civic life and understand and uphold their rights and duties as citizens.

It has been argued that a healthy and stable democracy needs citizens who care about, are willing to take part in, and are capable of shaping the common agenda of a society (Lawrence 2003). As a result, citizen participation (whether through the institutions of civil society, political parties, or the act of voting) is seen as important in demonstrating whether life in Australia is getting better.

There are a wide range of views as to which aspects of democracy, governance and citizenship are most important in demonstrating whether life in Australia is getting better. For a long time these elements, while seen as critically important, were not measured as they were harder to define and measure than more tangible aspects of life such as the value of goods purchased or life expectancy. However, in recent years work has been undertaken, internationally and nationally, to identify indicators relating to democracy, governance and citizenship, and further research will continue to shape what we present in future issues of Measures of Australia's Progress (MAP).

Due to the complex nature of this dimension of progress, the following commentary presents a range of indicators to help assess whether democracy, governance and citizenship in Australia is getting better. These include: changes in the take-up of Australian citizenship, the proportion of informal votes cast in a federal election, the number of federal parliamentary candidates, Aboriginal and Torres Strait Islander representation in parliament, women in parliamentary and leadership positions, and Australia's Official Development Assistance to overseas countries.

The selection and organisation of the indicators has been drawn from the framework developed by the International Institute for Democracy and Electoral Assistance (IDEA). The discussion that follows is not intended to comprehensively cover all elements set out in the IDEA framework. In some instances the data are not available, while other elements may not be regarded as significant for Australia.

Further information has also been provided relating to voter turnout in elections; civic participation in Australia; Australians who volunteer for management work, to sit on committees or manage a service program; and the environmental citizenship of Australians.

For a full list of definitions, see the Democracy, governance and citizenship glossary.

RELATED PAGES

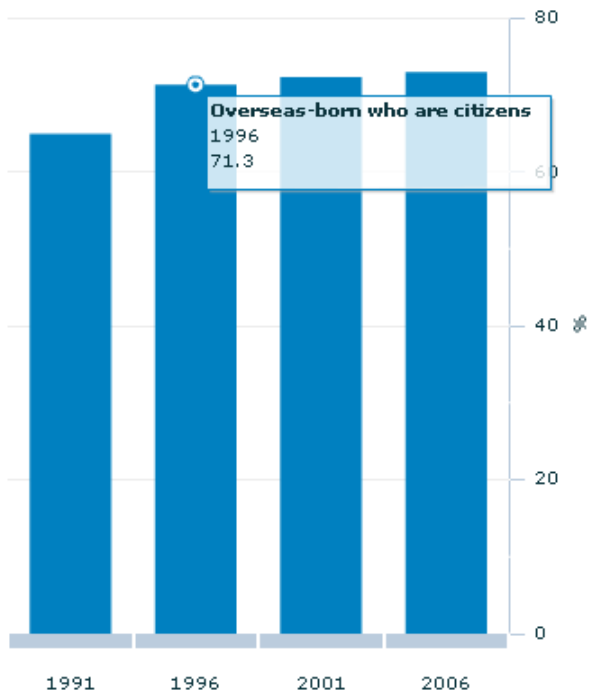
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Democracy, governance & citizenship

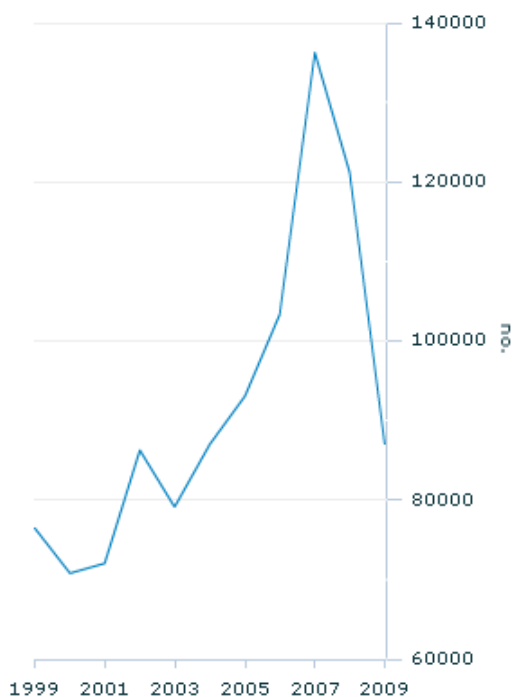
Overseas-born residents(a) who are citizens



Footnote(s): (a) Proportion of all overseas-born residents who had lived in Australia for about two years or more.

Source(s): Data available on request, Australian Censuses of Population and Housing

People who were conferred Australian citizenship(a)



Footnote(s): (a) Year ending 30 June.

Source(s): Department of Immigration and Citizenship, Annual reports, 1998-2009

CITIZENSHIP

Citizenship is a common bond for Australians. It brings both rights and responsibilities, contributing to both individual and societal wellbeing. For example, citizens have rights beyond those offered to permanent residents, including the right to vote, the right to stand for public office, and the right to hold an Australian passport. But they also have additional responsibilities. They are, for example, required to enrol on the electoral register and vote in elections, serve on a jury if required, and defend Australia should the need arise.

Because only Australian citizens in the main can vote in elections, the proportion of residents who are citizens is one measure of the extent of democratic decision making in Australia. In 2006, 86% of all people living in Australia were citizens and 7% did not state their citizenship status.

Another way to view citizenship is to look at the proportion of overseas-born Australian residents (who have lived here for about two years or more) who are Australian citizens. In 1991, 65% of overseas-born long term residents were Australian citizens. This increased to 71% in 1996 and 73% in 2006. However, changes in this and other citizenship indicators are influenced by changes in the eligibility criteria to apply for citizenship, such as visa requirements, the number of visas awarded in any given year, and the citizenship residence requirement increasing from two years to four years (including one year as a permanent resident) in July 2010 (DIAC 2010).

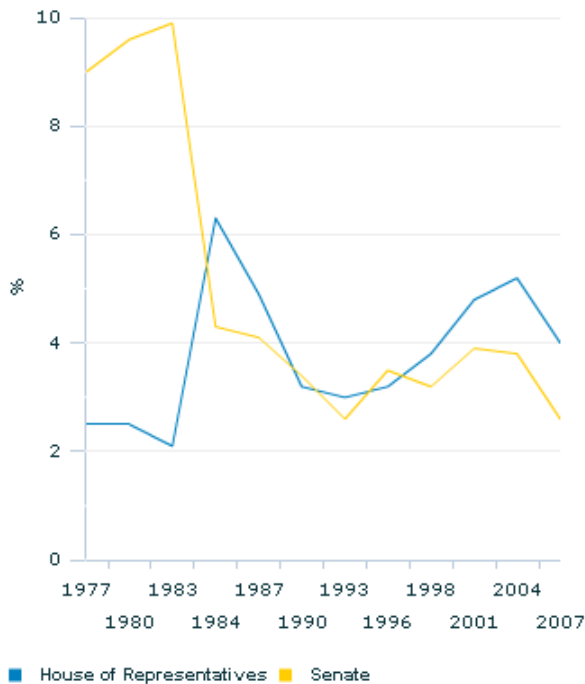
Prior to 2007 there was a general increase in the number of people who were conferred citizenship, rising from 76,500 people in 1998-99 to a peak of 136,000 people in 2006-07. This reflects the multiple amendments made to Australia's citizenship legislation, which generally made citizenship easier to acquire. However, in 2007 this trend was reversed when new changes were introduced, including an increase in the residence requirement from two to four years and a citizenship test. Subsequently, the number of people who were conferred citizenship fell to 87,000 people in 2008-09 (Parliament of Australia 2009a).

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Informal votes in Australian federal elections



Source(s): AEC Informal Voting

INFORMAL VOTES

In Australia, as in all democracies, regular elections are held to give people the opportunity to vote for the party of their choice. Elections enable society to exercise control over governments and their policies, and to make governments accountable to the electorate (for example, by providing an opportunity to vote in a different party).

In Australia, voter turnout is not necessarily a good measure of participation of citizens in democratic society. Enrolment and voting in state and federal elections is compulsory and enforced. For this reason, a more informative measure to consider is the proportion of informal votes cast to show whether citizen engagement in this democratic process is improving.

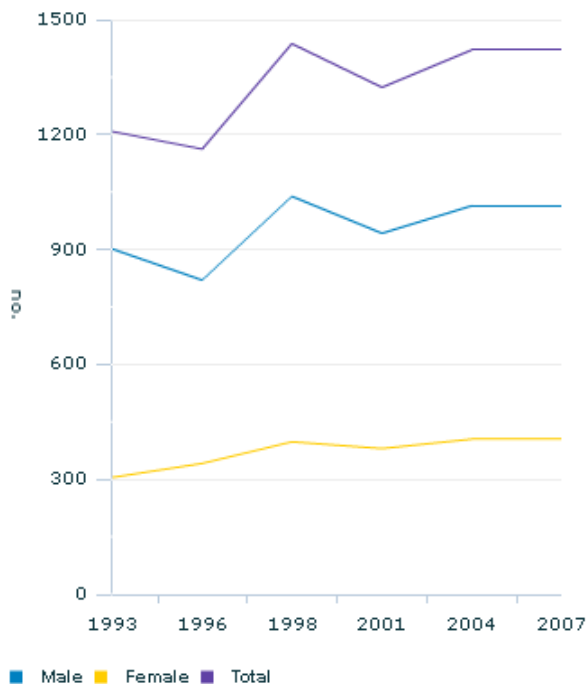
In Australia, an 'informal vote' is one in which the ballot paper was completed incorrectly and so was not included in the final count (in most countries this is called an 'invalid vote'). An individual may cast an informal vote for any number of reasons, including simple errors, or because the electoral system is too complex (for example, they may be confused by the complex voting documentation), or because they want to make a deliberate protest or express disillusionment under a system of compulsory voting (AEC 2003).

The proportion of informal votes cast in federal elections was around 2% for the House of Representatives during the late 1970s and into the early 1980s. During the same time, Senate informal votes were between 9% and 10%. In 1984, a new method of voting for the Senate was introduced which led to a dramatic reduction in Senate informal votes, but appeared to cause confusion among voters and led to a rise in the proportion of House of Representative informal votes to 6%. While the House of Representatives informal vote rate has since declined, to 4% in the 2007 federal parliamentary election, it is still above earlier levels.

RELATED PAGES

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- Democracy governance and citizenship references

Federal parliamentary election candidates



Source(s): Australian Electoral Commission, Federal Election Reports

STANDING FOR OFFICE

Standing for public office is a form of political participation. The number of candidates who stand for public office can indicate both public interest and motivation in standing for election, as well as commitment from political parties in selecting and supporting candidates to stand in elections. However, it is not possible to gauge the diversity or quality of candidates from information on the number of candidates.

Between 1993 and 2007, the number of candidates standing for election at Australian federal elections increased. Over 1,400 candidates (1,013 men and 407 women) stood for election at the 2007 federal parliamentary election (1,054 for the House of Representatives, and 367 for the Senate), compared with around 1,200 in 1993. During this period the number of seats in the House of Representatives increased by three from 147 to 150, accounting for some of this change (AEC 2009).

There has also been an increase in the number of political parties supporting candidates in elections. In 2007, 46 political parties fielded candidates compared with 35 in 1993 (AEC 2009).

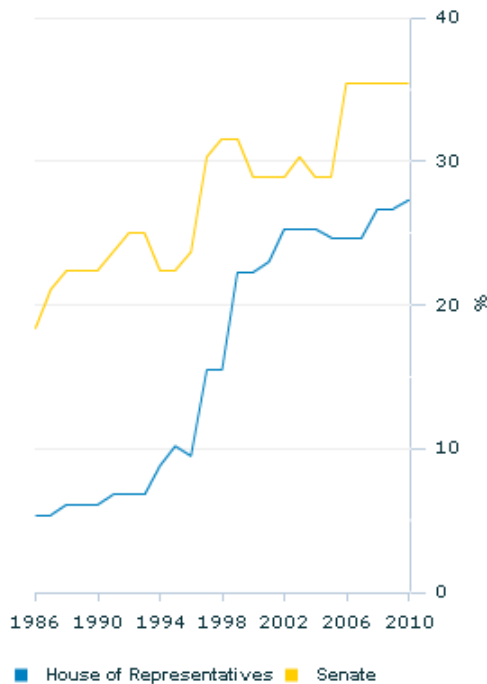
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Proportion of federal parliamentarians who are women(a)



Footnote(s): (a) At 1 January

Source(s): Parliament of Australia, Parliamentary Handbook of the Commonwealth of Australia, 2010

WOMEN IN PARLIAMENT

One of the principles underpinning democratic government is that parliament should represent and express the will of the people. Civil society is seen by many to be more effective if parliament is widely representative of the population. Since women make up approximately half of Australia's population, their representation in parliament is seen as crucial in a democratic society.

The proportion of federal parliamentary candidates who are women provides an indication of women's political participation and of the level of support for female candidates from political parties. In the 2007 federal parliamentary election, 29% of candidates were women compared with 25% in 1993 (AEC 2009). The proportion of elected parliamentarians who were women after the 2007 federal election was 28%, compared to 13% in 1993.

The proportion of federal parliamentarians who are women has risen markedly over the past 20 years. On 1 January 1986, one in twenty members of the House of Representatives were women (5%) rising to more than one in four (27%) by the beginning of 2008. Similarly, close to one in five senators were women in 1986 (18%) rising to more than one in three in 2010 (36%) (AEC 2009; Parliament of Australia 2010b).

In the federal government ministry, as at the end of June 2010, there were nine female ministers and parliamentary secretaries (representing 23% of ministers and parliamentary secretaries), including the Prime Minister The Hon Julia Gillard MP and a further three who were Cabinet members. Around 17% of shadow ministerial and parliamentary secretary positions were held by women (Parliament of Australia 2010b).

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ABORIGINAL AND TORRES STRAIT ISLANDERS IN PARLIAMENT

The first Aboriginal and Torres Strait Islander parliamentary representative was Mr Neville Bonner AO (1922–1999) who was elected to federal parliament in 1971 as a Senator for Queensland. Since then there have been a number of Aboriginal and Torres Strait Islander parliamentarians in both federal and state parliaments (AEC 2010a).

At June 2010, there were no Aboriginal and Torres Strait Islander members of federal parliament. However, there were nine Aboriginal and Torres Strait Islander Australians who were members of state and territory parliaments and legislative assemblies: five of these were women (Parliament of Australia 2009b). Of these nine Aboriginal and Torres Strait Islanders, there were:

- five members of the Northern Territory Legislative Assembly (three of whom were women)
- one female member of the New South Wales parliament
- one male member of the Tasmanian parliament
- two members (one male, one female) of the Western Australia parliament.

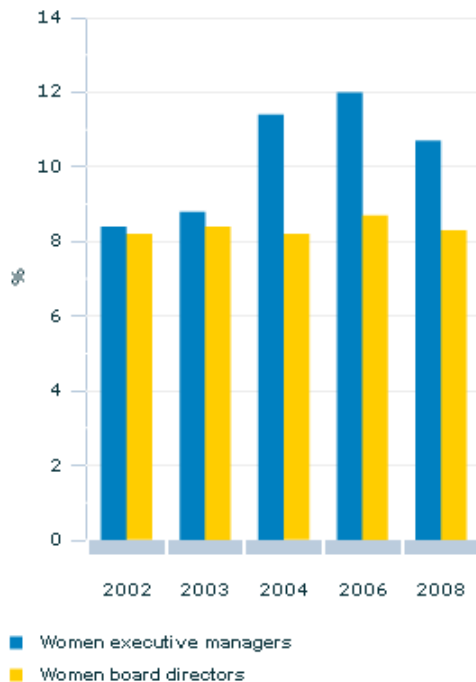
In the Northern Territory, one-fifth of the Legislative Assembly electorates were represented by Aboriginal and Torres Strait Islander Australians.

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Proportion of executive managers and board directors of ASX200 companies(a) who are women



Footnote(s): (a) The ASX200 is an index that tracks the top 200 companies (based on their market capitalisation) listed on the Australian Stock Exchange.

Source(s): Commonwealth Equal Opportunity for Women in the Workplace Agency (EOWA), Australian Census of Women in leadership, 2002-2008

WOMEN IN LEADERSHIP

Corporate leadership is an important aspect of governance in Australian society. This is because the business sector drives our economy, influences policy, and provides leadership and support in the community. Gender diversity in corporate leadership indicates equity in one area of leadership and governance, as well as the level of access and support available for women to take up business leadership roles.

The Australian Government Equal Opportunity for Women in the Workplace Agency (EOWA) collects information on women in executive management and board director positions by conducting a census of Australia's top 200 companies listed on the Australian Stock Exchange (ASX200). In 2008, 11% of ASX200 company executive managers were women, a decline from 12% in 2006, but an increase from 8% in 2002. In 2008, 55% of companies employed at least one female executive manager, an increase from 47% in 2002.

The progress evident in the increasing proportion of companies employing female executive managers has not been replicated for female board directors. The proportion of ASX200 board directors who were women was 8% in both 2002 and 2008, although this had risen to 9% in 2006. In 2008, 51% of ASX200 companies did not have any female board directors. In 2008, the resources boom led to a change in the industry mix of the ASX200, with increased representation of male-dominated industries, which may have contributed to the 2008 result (EOWA 2002-2008).

Women are represented in a range of other leadership and decision-making positions across Australian society. For example, in August 2010 almost a quarter (23%) of Australian ambassadors and heads of diplomatic missions were women (DFAT 2010). In May 2010, 50% of the members of the inaugural national executive of the new National Congress of Australia's First Peoples were Aboriginal or Torres

Strait Islander women (NCAFP 2010). In 2009, over one-third (37%) of senior executives in the Australian Government Public Service were women, and 33% of members on Australian Government controlled boards and bodies were women (OFW 2009).

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Ratio of Official Development Assistance(a) to Gross National Income



Footnote(s): (a) Year ending 30 June. Constant prices based at 2007-08 derived using ABS non-farm implicit price deflators.

Source(s): AusAID Statistical Summary 2005-06, 2006-07 & 2007-08 (Green Book)

INTERNATIONAL CITIZENSHIP

As a member of the global community, Australia contributes aid for communities overseas both in monetary terms and in terms of providing expertise. The Australian Government's official development assistance or aid program aims to assist developing countries in reducing poverty and in achieving sustainable development consistent with Australia's national interest (AusAID 2010).

Official development assistance (ODA) is a statistic compiled by the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) to measure aid. The DAC first compiled the statistic in 1969. It is widely used by academics and journalists as a convenient indicator of international aid flow.

Australia's ODA totalled \$3.2b in 2007-08, representing 0.3% of Gross National Income (GNI). Although Australia's ODA has nearly doubled in constant-price terms over the last decades (from \$1.7b in 1971-72), ODA as a proportion of GNI has decreased over the same period. In the early 1970s, the ratio of ODA to GNI was about 0.5%, and except for a period in the mid 1980s, generally declined to 0.27% in 1998.

The rise in the mid 1980s was due to the inclusion of Australian Government contributions towards educating private students from developing countries in Australian tertiary and secondary educational institutions in 1983-84 and the one off bringing forward of multilateral development bank payments in 1988-89, which had the effect of increasing 1988-89 but decreasing 1989-90 expenditure (AusAID 2010).

In the decade to 2008, the ratio of ODA to GNI was at a low of 0.25% from 2001 through 2004 but has risen again to 0.3% in recent years.

The sector benefiting most from Australia's international development assistance in 2007-08 was social infrastructure and services (\$1.6b), including \$794m for government and civil society, \$305m for

education, \$237m for health and \$118m for population programs and reproductive health (AusAID 2010).

The regions receiving the most assistance in 2007-08 were East Asia (\$953m), Papua New Guinea and Pacific (\$867m) and South Asia (\$287m). Countries receiving the most assistance were Indonesia (\$424m), Papua New Guinea (\$375m), the Solomon Islands (\$238m) and Afghanistan (\$138m) (AusAID 2010).

Humanitarian, emergency and refugee assistance accounted for \$463m in 2007-08. Countries benefiting from Australian support included Afghanistan (\$232m), Myanmar (Burma) (\$43m) and Indonesia (\$87m) (AusAID 2010).

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ASPECTS OF DEMOCRACY AND CITIZENSHIP

Indicators that provide a picture of the level of involvement of residents in determining the type of society in which they live, over and above the minimum of voting in political elections provide important insights into the progress of democracy, governance and citizenship. For example, a community where residents participate in civic or political groups, devote a significant portion of their time to volunteer activities, or invest in environmentally-friendly industries, may be more resilient and will contain many bonds between individuals and groups, including across generations.

The following section looks at voter turnout in elections, civic participation, people who volunteer for management work, to sit on committees or manage a service program, and Australians' environmental citizenship.

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VOTER TURNOUT

Voter turnout is a form of political participation. The level of voter turnout can indicate a strong democracy and how representative governments are of the electorate. However, this measure can be difficult to interpret. Low turnout might represent a weak democratic system or alienation of the electorate from the electoral process. Alternatively, it might represent widespread contentment among voters (IDEA 2002).

In Australia enrolment and voting in state and federal elections is compulsory, so voter turnout is not necessarily a good measure of progress in our democracy, and it is perhaps more informative to consider the proportion of informal votes cast. Voter turnout in federal elections has remained at 94% or higher since the 1925 federal election when it was about 91% (AEC 2010b).

In June 2009, the Australian Electoral Commission (AEC) estimated around 92% of eligible Australians were enrolled to vote. There were differences in enrolment across age groups, for example, a lower proportion of eligible 18–25 year olds were enrolled (81%) than eligible Australians in general (AEC 1998-2009).

Comparing the voter turnout rates for compulsory and non-compulsory local government elections, in the 2008 local government elections in New South Wales and Victoria where voting is compulsory, the turnout rate was 83% and 76%, respectively (NSWEC 2008; VEC 2010). However, in other states where voting is not compulsory, turnout rates were much lower. For example, about 56% of enrolled people voted in Tasmania's 2009 local government elections (TEC 2010), and 33% did so in Western Australia's 2009 local government elections (WAEC 2009). There is concern from some parts of the community about the relatively low voter turnout at local government elections. For example, increasing voter turnout at local government elections is one of the targets embodied in South Australia's Strategic Plan (SA Government 2007).

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CIVIC PARTICIPATION

Civil society is 'the non-government and not-for-profit groups and organisations that have a presence in public life, expressing the interests of their members and others in society' (World Bank 2006). If citizens participate in such arenas, their concerns, needs and values can be incorporated into government decision making. The overall goal is to arrive at better collective decisions that are supported by the population, and to foster population wellbeing (World Bank 2002). Civic engagement is seen as resulting in better government because citizens in civic communities expect better government, and (in part through their own efforts) get it; and because the government performance is improved by the social infrastructure of civic communities and the democratic values of both officials and citizens (Putnam 1993; Putnam 2000). From a perspective of individual wellbeing, civic participation can often extend social networks and develop skills for further participation in democracy and governance (ABS 2004a).

In measuring civic participation, we consider collective and individual activities that reflect interest and engagement with governance and democracy: for example, membership of civic organisations such as political parties and trade unions; serving on committees or clubs, voluntary organisations and associations; contacting members of parliament; participating in demonstrations and rallies; and attending community consultations. More recent forms of civic participation include support for global or local advocacy groups or campaigns, email networks, or one day activities such as 'Clean Up Australia' (630,000 people participated in Clean Up Australia day in 2009) (CUA 2009).

In 2006, 19% of adults reported that they had actively participated in civic and political groups in the previous 12 months. This level of involvement varied with age, peaking at around 24% for people aged 45-64 years. The civic or political groups that people were most likely to be active in were trade union, professional and technical associations (7%), environmental or animal welfare groups (5%), followed by body corporate or tenants' associations (4%). Only 1% reported active participation in a political party (ABS 2007b).

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Management committee and coordination work volunteering(a)**MANAGEMENT AND COMMITTEE VOLUNTEERS**

Taking a leadership role in groups and organisations is often most closely associated with civic participation (for example, being an office holder or committee member). In 2006, 10% of adults reported volunteering for management work, to sit on committees or to manage a service or program, slightly lower than the proportion in 2000 (14%) (ABS 2001).

In 2006, people in the 35–44 year age group reported the highest rates of such voluntary work at around 13% (down from 22% in 2000). Managers and administrators and Professionals had relatively high rates of volunteering for management, committee and co-ordination work (12% and 13% respectively). These tended to be the same groups of people (along with Advanced clerical and service workers) who were most highly represented among volunteers in general, all with volunteering rates of over 40% (ABS 2007c).

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Whether concerned about the environment

ENVIRONMENTAL CITIZENSHIP

Environmental citizenship activities include donating time and money to protect the environment, purchasing and using environmentally friendly products, participating in recycling, and taking measures to conserve water and energy.

Some aspects of environmental citizenship, such as household recycling and water conservation, are explored under environment commentaries, therefore this commentary focusses on changes in people's concern about environmental issues, and the type of environmental action that people take (see environmental sections linked below).

Concern

Between 1992 and 2004, the proportion of people concerned about the environment declined from 75% to 57%, but in 2007-08 just over four in five people (82%) reported that they were concerned.

Climate change is considered by many to be one of the biggest challenges facing Australia and may require action from individuals, communities, organisations, industry and governments (ABS 2009b). Nearly three-quarters (73%) of Australian adults were concerned about climate change in 2007-08.

The Australian Capital Territory reported the highest concern about climate change (81%) and the Northern Territory the lowest concern (69%).

Men were less likely to be concerned about climate change than women (25% of men reported a lack of concern compared with 19% of women) in 2007-08. Also older Australians (aged 65 years and over) were the least concerned about climate change, with 30% not concerned about climate change compared to 18% of people aged 35-44 years.

Action

Over 5 million people (34%) aged 15 years and over took some form of environmental action in 2007-08. People most commonly signed a petition (17%) or donated money to help protect the environment (14%), while attending a demonstration for an environmental cause was relatively rare (2%). Some people expressed their concern about the environment through a letter, email or by talking to responsible authorities (10%), or by volunteering, or becoming involved in environmentally related concerns (9%). Two-thirds of Australian adults did not take any environmental action (ABS 2009b).

RELATED PAGES

- Biodiversity
- Land
- Inland waters
- Oceans and estuaries
- Atmosphere
- Waste
- Democracy governance and citizenship glossary
- Democracy governance and citizenship references



PROGRESS OF AUSTRALIANS

There are groups within Australia, such as Aboriginal and Torres Strait Islanders and young people, for whom there has been low representation in some leadership and decision making positions.

The following section explores issues relating to the participation of Aboriginal and Torres Strait Islanders, and of young people, in democracy and governance.

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ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLES

The right of Aboriginal and Torres Strait Islander Australians to vote in federal elections has been recognised since 1962. However, full franchise for Aboriginal and Torres Strait Islander Australians did not occur until 1965, when Queensland recognised Aboriginal and Torres Strait Islanders' right to vote in state elections - the last state to recognise this right (AEC 2010a).

It was not until the 1967 Referendum that the Australian Constitution was amended to include Aboriginal and Torres Strait Islander people in the federal government's legislative responsibility and in estimates of the Australian population. The 1967 referendum, along with the right to vote recognised a few years earlier, is regarded as a turning point in the relationship of Aboriginal and Torres Strait Islander people with the Australian nation-state and a milestone that addressed many symbolic and real needs of Aboriginal and Torres Strait Islander people (Bennett 2004).

For information on Aboriginal and Torres Strait Islander representation in state and federal parliaments see the 'Aboriginal and Torres Strait Islanders in parliament' section linked below.

In 1989, the Aboriginal and Torres Strait Islander Commission (ATSIC) was created as a nationally representative organisation of the Aboriginal and Torres Strait Islander peoples. ATSIC advised governments on Aboriginal and Torres Strait Islander issues, advocated for Aboriginal and Torres Strait Islander people at the local, regional, national and international levels and monitored how other government agencies provide services to their Aboriginal and Torres Strait Islander clients. ATSIC was directed by a Board of Commissioners elected from members of Regional Councils in each of the ATSIC zones, who were in turn elected by Aboriginal and Torres Strait Islander people across Australia (ATSIC 2001).

A major change to Aboriginal and Torres Strait Islander governance and representation came with the abolition of ATSIC in March 2005. ATSIC regional councils were dissolved at the end of June 2005. ATSIC's functions were transferred to a mainstream Commonwealth government agency, the Department of Family and Community Services and Indigenous Affairs. A new body, the National Indigenous Council, was appointed by the Commonwealth government as a key advisory body on Aboriginal and Torres Strait Islander affairs. This council was abolished in 2008. In May 2010 the National Congress of Australia's First Peoples was established. The new Congress was established to be a national representative body, a national leader and advocate for recognising the status of Aboriginal and Torres Strait Islander peoples as First Nation peoples (NCAFP 2010).

In almost all areas of Aboriginal and Torres Strait Islander affairs, Aboriginal and Torres Strait Islander leadership has been identified as a priority. There are a range of Aboriginal and Torres Strait Islander leadership programs presently operating throughout Australia, all at varying stages of development, emphasis, and geographic reach and location (Queensland Govt 2010). Some of the organisations involved in leadership development include: the Australian Indigenous Leadership Centre; the Lingiara Foundation; Elders' leadership and cultural guidance programs; and the National Indigenous Youth Movement of Australia.

RELATED PAGES

- [Aboriginal and Torres Strait Islanders in parliament](#)
- [Democracy governance and citizenship glossary](#)
- [Democracy governance and citizenship references](#)



YOUNG PEOPLE

Some research suggests that young people are less engaged with political and civic activity than those in older age groups. Young people may not have the skills, awareness, guidance and pathways available to them that would bring them into closer engagement with Australia's governance, or they may have a lower level of interest in civic participation and the responsibilities of citizenship (EC 2001; Saha 2005b).

Young adults in Australia are less likely to be enrolled to vote than older people. The AEC estimates that in 2008-09, 81% of eligible young Australians (18–25 year olds) were enrolled to vote, compared with 92% of all eligible Australians (AEC 1998-2009). In 2007, it was estimated that approximately 400,000 young Australians (aged 18–25 years) did not vote in elections because they were not registered (Saha 2009).

The intention of students to enrol on the Commonwealth Electoral Roll and vote in federal elections was found, by a national survey of schools in 2004, not to be universal. The survey of 4,900 senior secondary school students at 155 schools (the Youth Electoral Study conducted in conjunction with the Australian Electoral Commission) found that of students aged under 17, the majority (87%) intended to enrol to vote when they turned 17, while less than a third of those who were 17 years of age had registered to vote (Saha 2005a).

While young people can enrol to vote at the age of 17 years, they are able to vote in elections only when they have turned 18. While almost nine out of ten students surveyed said they intended to vote in federal elections once they turned 18 (87%), only one in two said they would vote in federal elections if this were not compulsory (50%) (Saha 2005a).

While the intention to vote in federal elections was relatively high, half of the students felt that they did not have sufficient knowledge and understanding of the issues or the political parties to make a decision about voting. Nevertheless, most students (82%) considered voting to be important (Saha 2005a).

Many senior secondary school students participate in political and civic activities. Over half of students surveyed in 2004 had signed a petition (55%), while 21% had collected signatures for a petition, and 15% had taken part in rallies or demonstrations. Students differentiated between the various social movements and causes they would support by taking part in a demonstration (Saha 2005b).

The 2004 Youth Electoral Survey survey found that students who participated in political and civic activities such as signing petitions, attending demonstrations, contacting politicians, contacting the media, doing voluntary work, or being involved in a civic organisation, such as Rotary, were more likely to report an intention to vote in federal elections if voting was not compulsory, than students who had not participated in political and civic activities (Saha 2005b).

In recent years the importance of including civics and citizenship in the school curriculum has been recognised. Between 1997 and 2004, the Commonwealth government's Discovering Democracy program ran in Australian primary and secondary schools (DEST 2010). The program recognised that to participate as active citizens throughout their lives, students need a thorough knowledge and understanding of Australia's political heritage, democratic processes, system of government, and judicial system. Following on from this program, curriculum statements of learning for civics and citizenship were developed collaboratively in 2006 by state, territory and federal education authorities, to be used by the separate jurisdictions in their own school curriculums (DEEWR 2006).

RELATED PAGES

- [Democracy governance and citizenship glossary](#)
- [Democracy governance and citizenship references](#)

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LINKS TO OTHER DIMENSIONS OF PROGRESS

People's participation in democracy, governance and citizenship is related to social capital. Further discussion of social capital and related concepts such as voluntary work can be found in the Family, community and social cohesion section.

The growth in the use of the Internet has helped people to access information and register opinions with government, and so the use of 'e-government' also sheds light on people's engagement with government. This is discussed in the Communication section.

More information about the types of action that people are undertaking in relation to their concerns about the environment can also be found in the relevant environment sections.

See also the sections linked below.

RELATED PAGES

- [Family community and social cohesion](#)
- [Communication](#)
- [Waste](#)
- [Atmosphere](#)
- [Inland waters](#)

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DEMOCRACY, GOVERNANCE AND CITIZENSHIP GLOSSARY

ASX200

An index that tracks the top 200 companies listed on the Australian Stock Exchange. The top 200 companies are based on their market capitalisation i.e. the number of shares on issue multiplied by the current share price.

Civic participation

Participation in civil society. Civil society is 'the non-government and not-for-profit groups and organisations that have a presence in public life, expressing the interests of their members and others in society' (World Bank 2006).

Enrolment

The Australian Electoral Commission (AEC) maintains and updates the Commonwealth electoral roll - a list of eligible persons who are registered to vote in Australian elections. You cannot vote at an election unless your name is on the electoral roll. Australian citizens over 18 years of age (with a few exceptions) must enrol to vote.

British subjects, resident in Australia, who were on a Commonwealth electoral roll as at 25 January 1984 can also vote in Australian elections.

Federal Parliamentary election candidates

The number of people standing as candidates for election at Australian federal Parliamentary elections, including both the House of Representatives and the Senate.

Gross national income (GNI)

This measures the total domestic and foreign value added claimed by residents. GNI comprises Gross Domestic Product (GDP) plus net receipts of primary income from non-resident sources. It is the aggregate value of gross primary incomes for all institutional sectors, including net primary income receivable from non-residents. Gross National Income was formerly called gross national product (GNP). GDP is the total market value of goods and services produced in Australia within a given period after deducting the cost of goods and services used up in the process of production but before deducting allowances for the consumption of fixed capital.

IDEA framework for democracy assessment

The International Institute for Democracy and Electoral Assistance (IDEA) was founded in 1995 and is an intergovernmental organisation with 21 member states including Australia, Canada, India, Mexico, Spain and Sweden. IDEA's role is supporting sustainable democracy in both new and long-established democracies and they have developed a framework for assessing democracy built around 14 key dimensions (IDEA 2001):

- Nationhood and citizenship: Is there public agreement on a common citizenship without discrimination?
- The rule of law and access to justice: Are state and society consistently subject to the law?
- Civil and political rights: Are civil and political rights equally guaranteed for all?
- Economic and social rights: Are economic and social rights equally guaranteed for all?
- Free and fair elections: Do elections give the people control over governments and their policies?
- Democratic role of political parties: Does the party system assist the working of democracy?
- Government effectiveness and accountability: Is government accountable to the people and their representatives?

- Civilian control of the military and police: Are the military and police forces under civilian control?
- Minimising corruption: Are public officials free from corruption?
- The media in a democratic society: Do the media operate in a way that sustains democratic values?
- Political participation: Is there full citizen participation in public life?
- Government responsiveness: Is government responsive to the concerns of its citizens?
- Decentralisation: Are decisions taken at the level of government which is most appropriate for the people affected?
- International dimensions of democracy: Are the country's external relations conducted in accord with democratic norms, and is it itself free from external subordination?

Informal vote

A vote where the ballot paper was completed incorrectly and so not included in the final count (in most countries this is called an 'invalid vote'). An individual may cast an informal vote because the electoral system is too complex (for example, they may be confused between state and federal voting) or because they want to make a deliberate protest or express disillusionment (AEC 2003).

Involvement in civic and political groups

The proportion of people involved in civic and political groups, including the following:

- Trade union, professional / technical associations
- Civic group or organisations
- Environmental or animal welfare groups
- Human and civil rights groups
- Body corporate or tenants' associations
- Political parties
- Consumer organisations

Management/committee work

Participation in management committees and functions, which involves making decisions about the direction and operation of an organisation. Examples include: sitting on a board, being an office bearer, being a member of the management board of a community welfare organisation, treasurer for the local church, managing a service or program, program planning.

Official Development Assistance (ODA)

Official development assistance (ODA) is a statistic compiled by the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development to measure aid. The DAC first compiled the statistic in 1969. It is widely used by academics and journalists as a convenient indicator of international aid flow.

Volunteer

Someone who willingly gives unpaid help, in the form of time, service or skills, to or through an organisation or group. The reimbursement of expenses in full or part (e.g. token payments) or small gifts (e.g. sports club T-shirts or caps) are not regarded as payment of salary, and people who received these are still included as voluntary workers. However, people who received payment in kind for the work they did (e.g. receiving farm produce as payment for work done on a farm, rather than cash) are not included as volunteers. The Voluntary Work Survey asked about voluntary work done in the 12 months prior to interview, excluding voluntary work done overseas.

Voter turnout

The number of people who voted in the election calculated by dividing the sum of formal and informal votes by the final enrolment figure.

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DEMOCRACY, GOVERNANCE AND CITIZENSHIP REFERENCES

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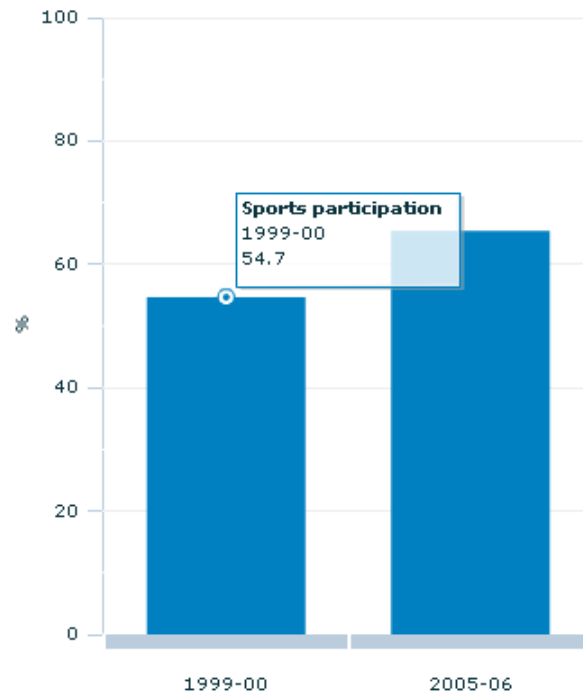
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Culture & leisure

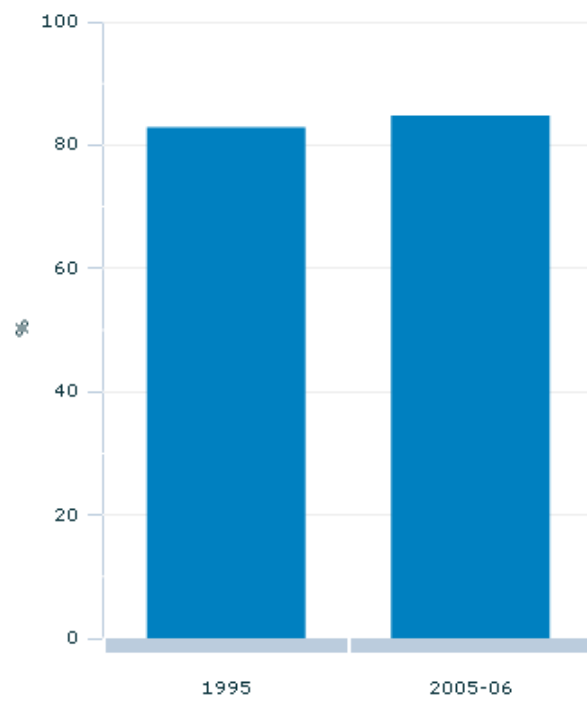
Culture and leisure, while not given headline status, has nevertheless been included as a supplementary dimension because of its relevance to whether life in Australia is getting better.

Between 2000 and 2006, the proportion of people participating in sport has increased while attendance at cultural venues or events, and sporting events has remained relatively stable.

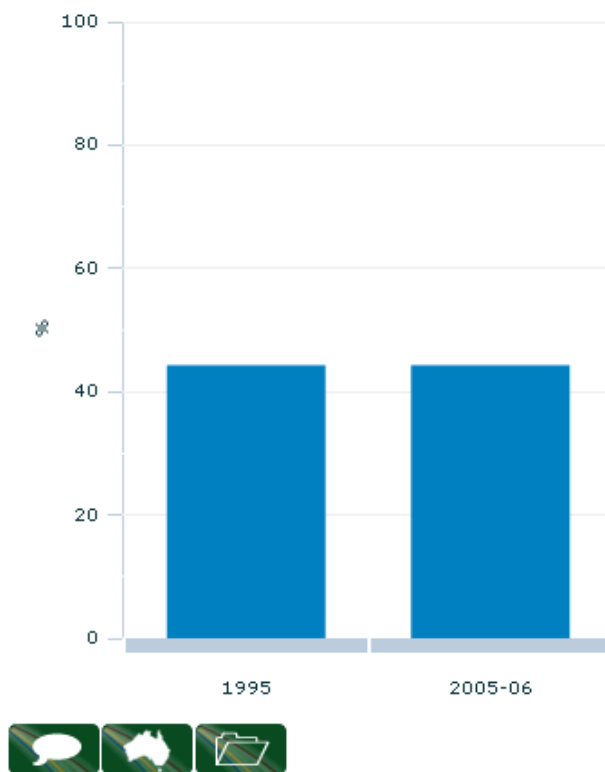
Participation in sport and physical recreation



Attendance at cultural venues and events



Attendance at sporting events



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CULTURE AND LEISURE AND PROGRESS

People can benefit in many ways from participation in cultural and leisure activities. Participation in these activities can enhance community cohesion. Cultural activities are seen as a valuable forum for social examination and debate, and a means of fostering the creativity, innovation, and dialogue necessary for economic development. Many leisure activities also bring about personal health benefits by providing relaxation and physical activity. Encouraging involvement in culture and leisure activities is seen as an important element in strategies aimed at maintaining and improving the overall wellbeing of Australians.

Whilst culture and leisure is not a headline dimension, it is a supplementary dimension because of its relevance to whether life in Australia is getting better.

The concept of culture and leisure allows us to acknowledge some inherent aspects of human nature, such as our need for identity, our creativity, history, attunement to aesthetic meaning, spirituality and our propensity for play and enjoyment. Given the wide variety of concepts covered in this dimension, it is difficult to select summary indicators that can adequately assess progress in this area. One measure of progress might focus on our freedom to express our cultural identity, who we are and to celebrate our cultural differences. Another might measure our ability and willingness to interact with other cultures, or to participate in the arts, and in sport and recreational activities. Currently, there are no indicators available to measure these concepts.

Three supplementary indicators are included relating to participation and attendance in the arts, and in sport and leisure activities.

Further information is also provided on free time and volunteering in sport and culture.

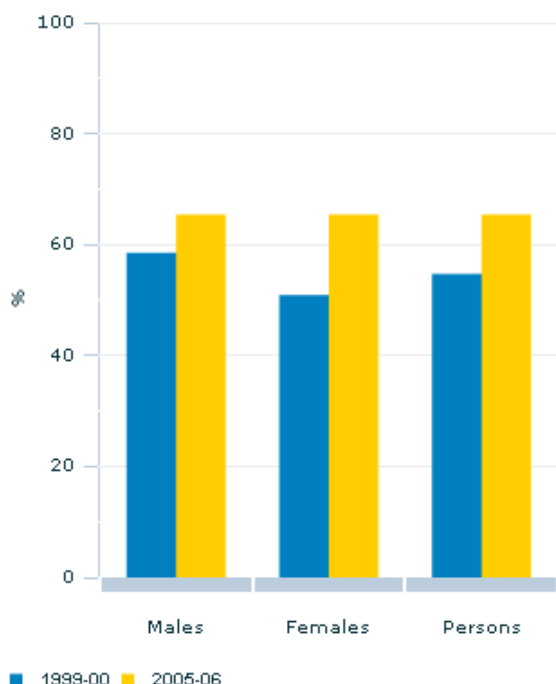
For a full list of definitions used in culture and leisure, please see the Culture and leisure glossary.

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Participation in sport and physical recreation(a)(b)



Footnote(s): (a) Proportion of people aged 18 years and over. (b) People who participated in sport at least once in the 12 months prior to interview.

Source(s): ABS Participation in Sport and Physical Activities 1999-2000 (cat. no. 4177.0); ABS data available on request, 2005-06 Multi Purpose Household Survey

PARTICIPATION IN SPORT AND PHYSICAL RECREATION

Participation in sport and physical activities is an important feature of the Australian lifestyle and plays a large part in Australians' lives. Participation in sport and physical activities provides opportunities for social interaction and opportunities for improving health and physical fitness.

Between 1999-2000 and 2005-06, participation in sport and physical recreation activities rose from 55% to 65%. While men and women's participation rates in sport in 2005-06 were the same (65%), men were more likely to participate in sport once or twice a week, while women were more likely to participate in sport more than twice a week. Walking for exercise, participating in aerobics or fitness and swimming were the three most common sports for both men and women. The next most popular sports for women were tennis, cycling or netball, whereas men were more likely to participate in golf, cycling, running and outdoor cricket.

The two main motivators reported in 2005-06 by both men and women for participating in sport and physical recreation were health and fitness (52% of men and 60% of women) and enjoyment (26% of men and 14% of women). For men, the third main motivator was social and family (8%) while for women it was wellbeing (9%).

For the 6.4 million Australians who did not participate or had occasional and infrequent (part year or full

year) participation in sport and physical recreation activities, reasons most commonly reported for not participating were insufficient time due to work, study, age or they were not interested.

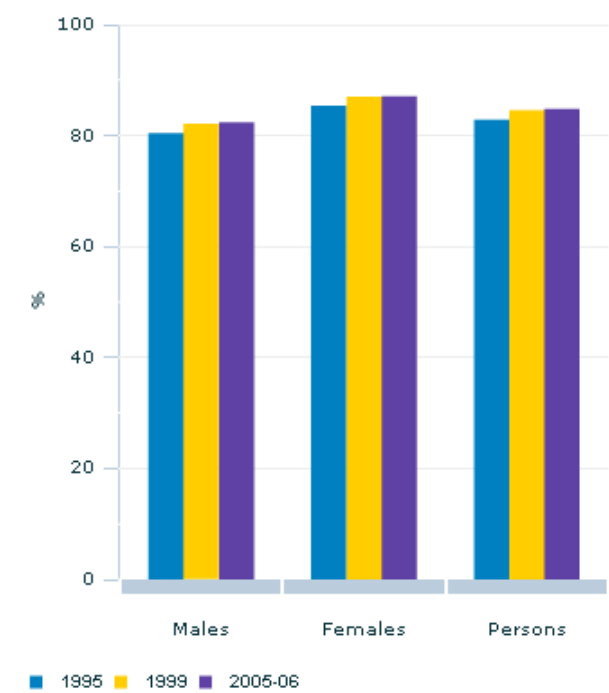
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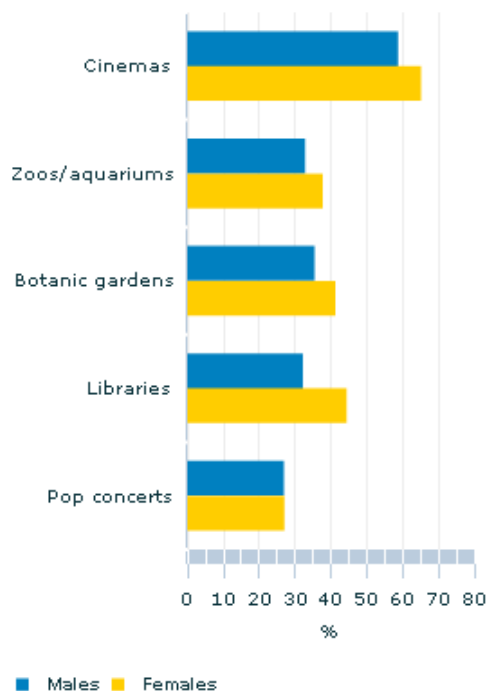
Attendance at cultural venues and events(a)
(b)



Footnote(s): (a) Proportion of people aged 15 years and over. (b) People who attended at least one cultural venue or event in the 12 months prior to interview.

Source(s): ABS Attendance at Selected Cultural Venues and Events 2005-06 (cat. no. 4114.0)

Top 5 cultural venues or events attended - 2005-06(a)(b)



Footnote(s): (a) Proportion of people aged 15 years and over. (b) People who attended at least one cultural venue or event in the 12 months prior to interview.

Source(s): ABS Attendance at Selected Cultural Venues and Events 2005-06 (cat. no. 4114.0)

ATTENDANCE AT CULTURAL VENUES AND EVENTS

Measures of attendance at cultural venues and events can provide an indication of our capacity to undertake these activities, and of the importance we place on their contributions to our wellbeing (ABS 2008c).

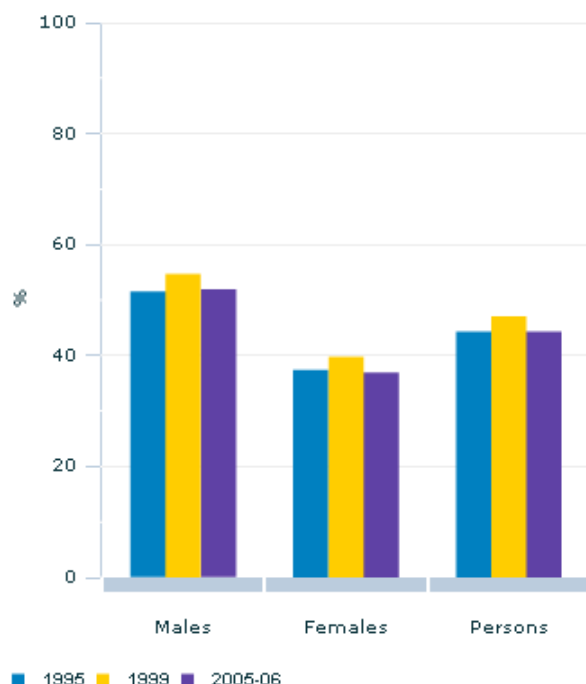
The proportion of Australians who attended a cultural venue or event has remained relatively steady during the decade 1995 to 2005-06 (83% and 85% respectively). In 2005-06, most Australians aged 15 years and over (85% or 13.6 million people) attended at least one cultural venue or event in the 12 months prior to interview. Cinemas were reported as the cultural venue with the highest attendance rate (62%). Over one-fifth (23%) of adults who attend the cinema during the year went between 6 to 10 times. A quarter (25%) of those who visited libraries went 21 times or more in the year. In contrast, over half of the adults who attended museums (50%), musicals and operas (55%), and dance performances (54%), went only once during the 12 month period (ABS 2007a).

In 2005-06, attendance rates at all cultural venues and events were consistently higher for women than men. For example, 87% of women attended at least one cultural venue or event compared with 82% of men.

RELATED PAGES

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- Culture and leisure references

Attendance at sporting events(a)(b)(c)



Footnote(s): (a) Proportion of people aged 15 years and over. (b) People who attended at least one sporting event in the 12 months prior to interview. (c) Does not include motor sports.

Source(s): ABS Sports Attendance 2005-06 (cat. no. 4174.0)

ATTENDANCE AT SPORTING EVENTS

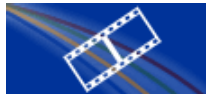
Attending sporting events can provide people with entertainment and a chance to spend time with families and friends.

In 1995 and 2005-06 the proportion of adults attending selected sporting events remained steady at 44%. In 2005-06, attendance rates at sporting events were higher for men (52%) than women (37%) in all age groups.

During the 12 months prior to interview in 2005-06, the most popular sport attended was Australian rules football (16% or 2.5 million adults), followed by horse racing at 13% (around 2 million adults). Over the same period 4% of adults attended a rugby union game (682,000), up from 3% in 1995 and 1999 (ABS 1999b). Conversely, there was a decrease in attendance at outdoor cricket matches and competitions between 1995 and 2005-06 falling from 8% to 5% (1.2 million adults to just over 700,000). Meanwhile, the proportion of adults who attended rugby league games remained relatively stable between 1995 and 2005-06 (10% and 9% respectively).

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- Culture and leisure glossary
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ASPECTS OF CULTURE AND LEISURE

People can benefit in many ways from involvement in culture and leisure activities. Leisure time gives people an opportunity to recover from the pressures of work and other commitments, to bond with family and community members, and to pursue their own interests such as sports, physical recreation and arts activities (e.g. reading, watching films, listening to music etc). Leisure includes those activities undertaken by a person for enjoyment, recuperation or relaxation and includes hobbies, recreation and cultural and artistic pursuits. These activities are likely to contribute to positive health benefits (both mental and physical), and as such encouraging involvement in culture and leisure activities is seen as a crucial element in strategies aimed at maintaining and improving the overall wellbeing of Australians.

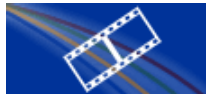
The availability of free time is an important factor in participation in culture and leisure activities. Many changes that took place during the 20th century could have resulted in an increase in the leisure time available to households (i.e. through the development of labour saving devices), however in many households the additional 'free' time has been filled by increased paid work responsibilities (ABS 2001b).

This section focuses on culture as expressed through participation in the arts, sports and recreational activities. More specifically, this section looks at leisure and free time, cultural trade and volunteering in sports and culture.

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LEISURE AND FREE TIME

The ABS Time Use Survey divides the activities on which people spend their time into four main categories: necessary time, contracted time, committed time, and free time. Necessary time describes activities which are performed for personal survival, such as sleeping and eating. Contracted time describes activities such as paid work and regular education where there are explicit contracts which control the periods of time in which the activities are performed. Committed time describes activities to which a person has committed him/herself because of previous social or community interactions, such as volunteering. 'Free time' is the amount of time left over when the previous three types of time have been taken out. It includes time allocated to social and community interaction, and recreation and leisure.

In 2006, adults spent (on average) 21% of their time on free time activities, similar to the proportion in 1997 (22%). Overall, men and women spent similar time on free time activities (ABS 2008b). Most free time was spent on a range of recreation and leisure activities such as watching TV, listening to the radio, taking part in sport and outdoor activities, reading and talking.

The average time spent on recreation and leisure as the primary activity in 2006 was 4 hours 13 minutes per day, down 15 minutes from 1997, with the largest falls being in time spent on 'sport and outdoor activities' (down 8 minutes) and 'games, hobbies, arts and crafts' (down 7 minutes). On average men spent 4 hours 29 minutes a day on recreation and leisure activities, whilst women spent 3 hours 57 minutes a day (ABS 2008b).

When visiting entertainment and cultural venues (such as cinemas, theatres and libraries) in 1997 and 2006, adults spent on average about 2 hours at the venue or event (ABS 2009a).

Free time activities are often combined (e.g. reading and listening to music) or done at the same time as activities in other time categories (e.g. housework and listening to the radio). Combining main and simultaneous activities shows that 8 hours and 47 minutes a day were spent on free time activities, with men and women spending similar amounts of time (ABS 2008b).

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CULTURAL TRADE

Overseas trade in goods and services has an impact on Australian culture which extends well beyond its economic significance, as the imports of items such as films, music and books influence the way Australians think and act (ABS 2009a).

Australia continues to import more cultural goods and services than it exports. The value of exports of cultural goods increased from \$576.2m in 2002-03 to \$585.1m in 2008-09. In 2008-09, this included \$259.7m of books, magazines, newspapers and other printed material.

In contrast, in 2008-09 Australia imported \$3,548.2m of cultural goods (ABS 2009a).

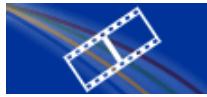
In 2008-09, the largest commodity imported was radio and television receivers and apparatus for sound and/or video recording or reproduction (\$1,526.7m). However, imports of these goods decreased by 13% between 2002-03 and 2008-09 (ABS 2009a).

In 2007-08, Australia earned \$287m from cultural services, approximately 0.6% of its total earnings from services for that year. This was for cultural services such as audio visual and related services, which includes royalties in television, theatrical film, video tapes and music (ABS 2009a). For audio visual and related services, Australia's largest earnings came from the sale of television programs totalling \$129m, up from \$87m in 2006-07 (ABS 2009a).

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VOLUNTEERING IN SPORTS AND CULTURE

The amount of time people voluntarily give to cultural and leisure organisations or groups can provide an indication of the value that Australian society places on these activities.

Sport and physical recreation organisations had the highest volunteer rate, with 11% of the population (1.7 million adults) volunteering for these types of organisations in 2006, and contributing a total of 187.2 million hours of their time. There were more female than male volunteers overall, however in sport and physical recreation organisations there were more male volunteers than females (ABS 2007d).

In 2006, just under 2% of adults volunteered for arts or heritage organisations and committed 30.6 million hours of their time, down from 33.6 million hours in 2000.

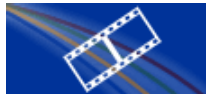
The median age of volunteers in 2006 for arts and heritage organisations was 49 years, while for sport and physical recreation organisations the median age was 43 years. The Northern Territory had the highest volunteer rate for sports and physical recreation (15%), while the Australian Capital Territory had the highest volunteer rate for arts and heritage (2.6%).

Volunteers in sporting organisations reported a variety of reasons for volunteering, with the three main reasons being to help others in the community, personal satisfaction, and personal or family involvement (ABS 2007d).

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PROGRESS OF AUSTRALIANS

Participation in culture and leisure activities has the capacity to generate social interaction through organised sports and competitions. In addition, regular participation in physical activity is now seen as important in terms of an individual's health and wellbeing. Participation in culture and leisure activities can also enhance creativity within society, with music and the performing arts playing an important role in the cultural life of Australians. They provide a source of entertainment, employment and creative outlet for many professional and amateur musicians, actors, dancers, singers and designers.

Demographic change can have an impact on the types of culture and leisure activities undertaken within the population, reflecting the changing preferences for activities through an individual's life cycle. In turn, the ageing of the Australian population will affect the types of culture and leisure activities in which people participate. In particular, it is anticipated that the movement of the large baby boomer cohorts into retirement will have implications for the nature of, and demand for, future culture and leisure activities and related facilities (ABS 2001b).

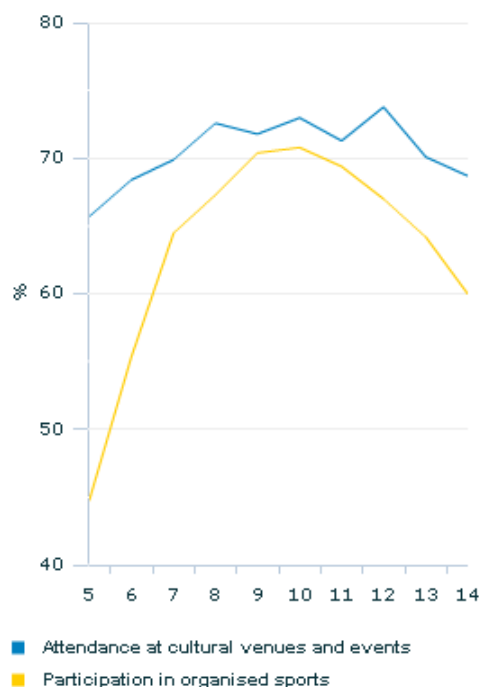
This section looks at participation and attendance at culture and leisure activities by children, young adults, older people, Aboriginal and Torres Strait Islander peoples, migrants, and within each of the states and territories.

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Children's participation in cultural and leisure activities(a)(b) - 2006



Footnote(s): (a) Proportion of children aged 5-14 years. (b) Children who attended cultural venues or events, or participated in organised sport, in the 12 months prior to interview.

Source(s): ABS Children's Participation in Cultural and Leisure Activities 2006 (cat. no. 4901.0)

CHILDREN

Children's participation in culture and leisure activities, including organised sport and physical activities, is an important part of a child's social development and the development of motor coordination skills, teamwork and physical fitness (ABS 2009e).

There was an increase in the participation rate of children (aged 5-14 years) in organised cultural activities from 30% in 2003 to 34% in 2009. In relation to organised cultural activities, the proportion of children playing a musical instrument rose from 17% in 2003 to 20% in 2009, while the proportion who participated in dancing rose slightly (from 12% to 14%). Dancing was the most popular organised cultural activity for girls, but the least popular with boys. For boys, the most popular organised cultural activity was playing a musical instrument.

Since 2003, the most popular leisure activity for boys has been watching television, DVDs or videos (around 98%). In 2009, this was followed by other screen based activities such as computer games (87%). For girls, the most popular leisure activity since 2003 was also watching television, DVDs or videos (around 98%). In 2009, this was followed by homework or other study (85%). There was a rise in the proportion of children undertaking computer activities outside of school hours, with the proportion accessing the internet increasing from 47% in 2000 to 79% in 2009 (ABS 2001a; ABS 2009b).

Participation in organised sport outside of school hours increased slightly between 2000 to 2003 from 59% to 62%, but remained relatively stable between 2006 to 2009 at around 63% (ABS 2009b). Participation in organised sport increased with age through the 5-10 year age group, but then noticeably decreased for those aged 10-14 years.

In 2009, the most popular sport for boys to participate in was outdoor soccer (20%) followed by swimming (17%). For girls, the most popular sport was swimming (20%), then netball (17%). For boys, a similar pattern was seen in both 2000 and 2003, however, the pattern was reversed for girls - netball was the

most popular sport followed by swimming in 2000 and 2003.

In 2009, there was a decrease in participation in bike riding as a leisure activity, from 68% in 2006 to 60% in 2009 (ABS 2009b).

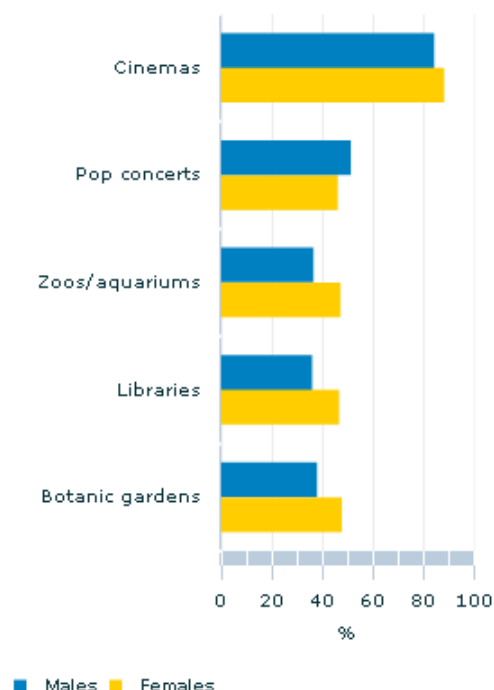
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Attendance at cultural venues and events - 2005-06(a)(b)



Footnote(s): (a) Proportion of people aged 18-24 years. (b) People who attended at least one cultural venue or event in the 12 months prior to interview.

Source(s): ABS Attendance at Selected Cultural Venues and Events 2005-06 (cat. no. 4114.0)

YOUNG ADULTS

Culture and leisure activities are seen to have a range of particular benefits for younger adults. Participation in sporting activities can help with the development of social skills and positive health outcomes, while attending and participating in cultural activities can assist with building self-esteem, improving communication and providing opportunities for social interaction (ABS 2001b).

Participation in sport amongst young adults (aged 18-24 years) is high and the participation rate remained relatively steady between 1999-2000 (74%) and 2005-06 (73%). However, during this same period, young women's participation in sport increased (from 67% to 72% respectively), whilst young men's decreased from 80% to 73%. The most popular sports and physical activities for young adults were aerobics, fitness, walking for exercise, swimming and running.

Young adults reported that the main motivators for their participation in sport and physical activities were health and fitness, enjoyment, and for social or family reasons. In contrast, the main constraints for young adults were insufficient time due to work, study, or they were not interested (ABS 2007b).

In 2005-06, young adults were most likely to attend popular music concerts and the cinema, and least likely to attend a classical music concert (ABS 2009a). These were similar to attendance rates in 1995 (ABS 1995).

Young women were more likely than young men to attend cultural venues and events in both 1995 and 2005-06. Conversely, in 2005-06 young men were more likely than young women to attend sporting events (61% compared with 53%), with Australian rules football and motor sports being the most attended by males aged 18-24 years (ABS 2007c).

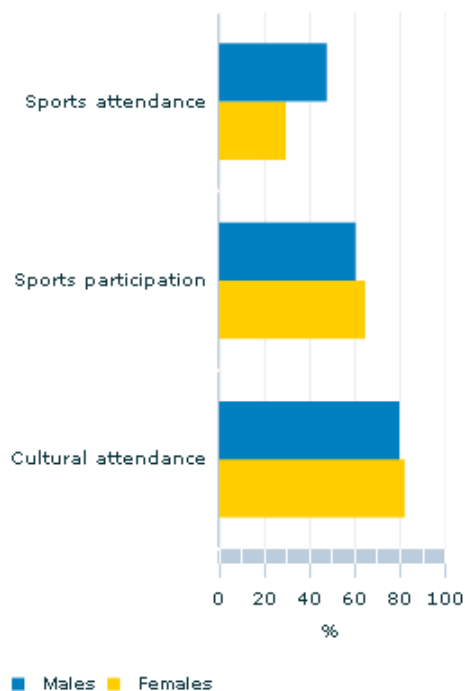
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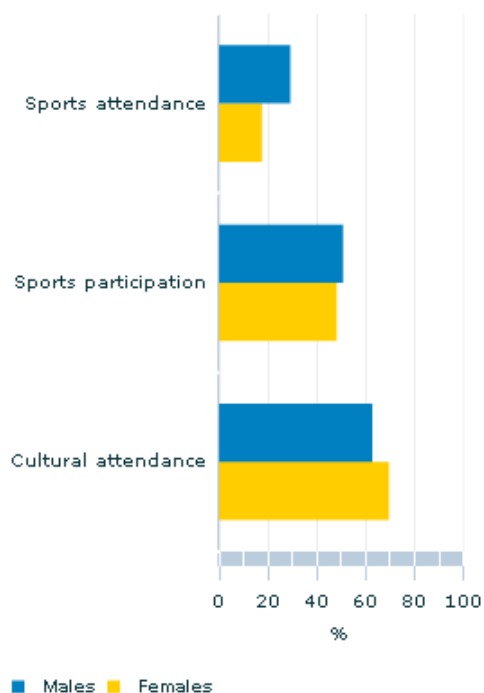
Attendance and participation - 55-64 year olds - 2005-06(a)(b)



Footnote(s): (a) Proportion of people aged 55-64 years. (b) People who attended cultural or sporting venues and events, or participated in sport and physical recreation at least once in the 12 months prior to the interview.

Source(s): ABS Attendance at Selected Cultural Venues and Events 2005-06 (cat. no. 4114.0); ABS Participation in Sport and Physical Activities 2005-06 (cat. no. 4177.0); ABS Sports Attendance 2005-06 (cat. no. 4174.0)

Attendance and participation - 65 years and over - 2005-06(a)(b)



Footnote(s): (a) Proportion of people aged 65 years and over. (b) People who attended cultural or sporting venues and events, or participated in sport and physical recreation at least once in the 12 months prior to the interview.

OLDER PEOPLE

In 2005-06, for older people (aged 55 years and over) the most attended cultural venues and events were cinemas, botanical gardens and the library, and the least attended were dance performances. The proportion who attended cultural venues and events decreased with age (ABS 2007a).

For those aged 55 years and over, women were more likely than men to attend at least one cultural venue or event (75% compared with 71%). However, men were more likely to attend at least one sporting event (ABS 2007a; ABS 2007c).

Attendance at sporting events increased over the period 1995 to 2005-06. In 2005-06, 39% of persons aged 55-64 years attended a sporting event (excluding motor sports) compared with 34% in 1995. For those aged 65 and over, 23% attended in 2005-06 compared with 21% in 1995.

In 1995, the most attended sport by older people (55 years and over) was horse racing (295,500 people) followed by Australian rules football (256,700 people). Between 1999 and 2005-06 this was reversed: Australian rules football had the highest attendance followed by horse racing (ABS 2007c). In 2005-06, the proportion of older Australian women (aged 55-64 years) attending sporting events was lower than men (30% compared with 48%).

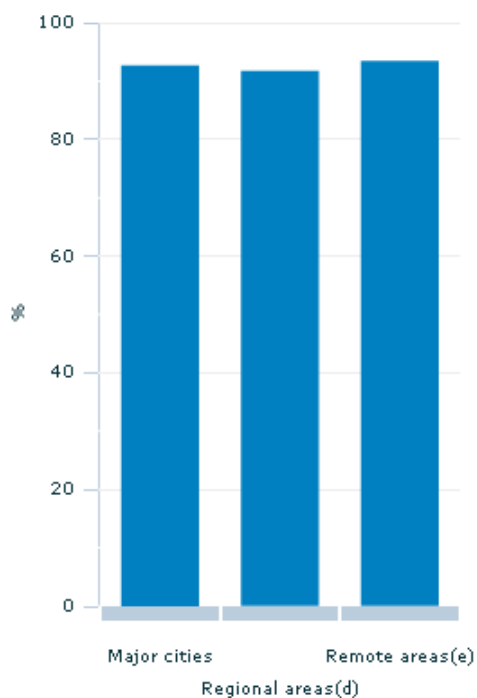
As with attendance at cultural venues and events and attendance at sports, participation in sport decreases as the age of participants increases. In 2005-06, persons aged 65 years and over had the lowest sports participation rate (49%) (ABS 2009d). Women aged 55-64 years were more likely to participate in sports and physical recreation than men (65% and 60% respectively), however for those aged 65 years and over men were slightly more likely to participate. For both men and women, walking for exercise was the most popular physical activity, however men were more likely to participate in lawn bowls and golf, whilst women had higher participation in aerobics, fitness and swimming.

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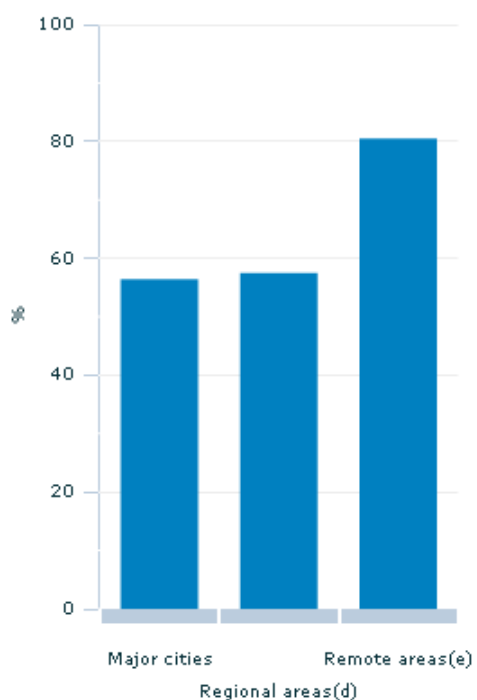
Participation in sporting social or community activities(a)(b)(c) - 2008



Footnote(s): (a) By remoteness area. (b) Proportion of Aboriginal and Torres Strait Islander people aged 15 years and over. (c) Aboriginal and Torres Strait Islander people who participated in sporting, social or community activities in the 12 months prior to the interview.

Source(s): ABS National Aboriginal and Torres Strait Islander Social Survey 2008 (cat. no. 4714.0)

Involvement in cultural events ceremonies or organisations(a)(b)(c) - 2008



Footnote(s): (a) By remoteness area. (b) Proportion of Aboriginal and Torres Strait Islander people aged 15 years and over. (c) Aboriginal and Torres Strait Islander people who were involved in events, ceremonies or organisations in the 12 months prior to the interview.

ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLES

Social involvement

In 2008, the majority (93%) of Aboriginal and Torres Strait Islander people aged 15 years and over had participated in some type of sporting, social or community activity in the 12 months prior to interview. This included activities such as coaching or refereeing sport, attending church or community festivals, and going to the movies, a park or a museum. Aboriginal and Torres Strait Islander children also had high levels of participation with 94% of those aged 4-14 years participating in some type of sporting, social or community activity.

Aboriginal and Torres Strait Islander elders are important members of Indigenous communities and are often knowledge keepers of their people's history, stories, culture and language. In 2008, almost one-third (31%) of Indigenous children aged 4-14 years spent at least one day a week with an Indigenous leader or elder.

Indigenous children living in remote areas were much more likely to spend time with an Indigenous leader or elder, with close to half (48%) spending at least one day a week in their company. In comparison, 23% of Indigenous children living in major cities and 28% of those living in regional areas spent at least one day a week with an Indigenous leader or elder. Just over two-thirds (67%) of Indigenous children living in major cities spent no time with, or did not have available, an Indigenous leader or elder.

Involvement in cultural events or activities

In 2008, almost three-quarters (73%) of Indigenous children aged 4-14 years and over three-fifths (63%) of Indigenous people aged 15 years and over were involved in cultural events, ceremonies or organisations in the 12 months prior to interview. Indigenous people who lived in remote or very remote areas reported higher rates of involvement than those living in the major cities (81% compared to 56%).

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MIGRANTS

Social participation may have positive impacts on the health of individuals and on the strength of communities. Minimising barriers to participation in culture and leisure activities for migrants can have a positive outcome by retaining links to their own cultural background and traditions, and by providing the opportunity for migrants to learn about aspects of Australian culture (ABS 2008a).

In 2005-06, proportionally more people from main English speaking countries attended cultural venues and events than those from other countries (90% compared with 76%). The most popular event attended by migrants in 1999 and 2005-06 was the cinema (57%), followed by botanic gardens (36%) and the library (36%) (ABS 2007a).

In Australia, as in many other countries, attendance at sporting events, or participation in sporting activities, is an avenue through which individuals can engage with the wider community.

In 2005-06, adults born overseas in main English speaking countries had the highest rate of participation in sport (72%). This was higher than the participation rate of those born in Australia (68%) and those born in other countries (51%). The most common sport or physical activity participated in by adults born overseas was walking for exercise, followed by aerobics, fitness, swimming, cycling and golf.

In 2005-06, attendance rates at sporting events for adults born overseas were considerably lower than for those born in Australia (42% for main English speaking countries and 21% for non-main English speaking countries, compared with 50% for born in Australia). Of those migrants who did attend sporting events the rate for men was much higher than for women (ABS 2007c). The sporting events migrants were most likely to attend were Australian rules football, horse racing and rugby league. Adults born overseas in main English speaking countries were more likely to attend rugby union and horse racing than those born in non-main English speaking countries. Conversely, adults born in non-main English speaking countries were more likely to attend outdoor soccer and cricket than those born in main English speaking countries.

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WHERE PEOPLE LIVE

Where people live can influence the cultural venues and events they attend, as well as the type and amount of participation in sporting events. Regional locations may cater for different requirements and lifestyles than the city and resources such as stadiums, theatres and art spaces in the city may vary from those available in regional areas.

In 2005-06, attendance rates at cultural venues and events (for people aged 15 years and over) in the six state capital cities was higher than for people in the rest of Australia. Conversely, attendance at sporting events was higher for people living outside the six state capital cities (46%) than those living in the six state capital cities (43%) (ABS 2009d).

For most cultural venues and events, residents in the Australian Capital Territory recorded the highest attendance rates. Western Australian residents had the highest attendance rate for zoos and aquariums, and South Australian residents had the highest attendance rates for other performing arts, and libraries (ABS 2007a).

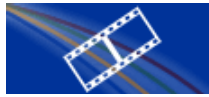
In 2005-06, the Northern Territory had the highest attendance rate (50%) at sporting events and New South Wales the lowest (42%) (ABS 2007c).

People living in the Australian Capital Territory had the highest participation in sport and physical recreation (80%), followed by those in Western Australia (70%) and Queensland (66%) (ABS 2009d).

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LINKS TO OTHER DIMENSIONS OF PROGRESS

Many leisure activities have a positive impact on health by providing relaxation and physical activity and by extending social networks. Participation in sports and leisure activities is seen as a crucial element in strategies aimed at maintaining and improving the physical and mental health of Australians. Participation can also support the development of social cohesion, integrate communities in positive ways and build social capital. People can become socially connected through arts and sporting activities, and this can further develop their skills and contribute to the cultural identity of the community. The amount of time available to participate in culture and leisure activities may be impacted by the amount of time spent in paid work. Culture and leisure are growth industries, and becoming an increasingly important sector of the economy.

The idea of leisure as those activities enjoyed in an individual's 'free time' - in terms of freedom from obligations or duty and in terms of the ways in which the time is spent - also includes activities with negative social implications. A range of criminal activities (such as graffiti and vandalism) and activities that can be clearly linked to negative social outcomes (e.g. gambling and drug use) remain leisure choices for some Australians.

See also the sections linked below.

RELATED PAGES

- National income
- Health
- Family community and social cohesion
- Communication
- Work
- Crime
- Household economic wellbeing
- National wealth

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CULTURE AND LEISURE GLOSSARY

Age

This is the person's age on their last birthday.

Aerobics/fitness

Includes callisthenics, gym, exercise bike and circuits

Attended cultural event(s) (Aboriginal and Torres Strait Islander)

Participation in traditional or contemporary Aboriginal or Torres Strait Islander cultural activities and events in the 12 months prior to interview. Events include funerals, ceremonies, Aboriginal and Torres Strait Islander festivals and carnivals, arts, craft, music, dance, writing or telling stories, and involvement with Aboriginal or Torres Strait Islander organisations. Participation may be for payment or without payment.

Attendance rate (cultural)

For any group, this is calculated by expressing the number of people who attended a venue or event at least once during the year as a percentage of the population aged 15 years and over in the same group.

Birthplace

Classified according to the Australian Standard Classification of Countries for Social Statistics (ASCCSS) (cat. no. 1269.0).

Constraints on sport participation

Reasons for non-participation or infrequent participation sought from persons who did not participate or participated 12 times or less in the 12 months prior to the interview.

Culture

For the purpose of this chapter the main focus will be on aspects of culture that are expressed through the arts. The definition equates culture with arts (film, broadcasting, visual arts, performing arts, literature, music etc.). Although culture can also be viewed in a broad sense as describing our way of life and shared values, such as an 'Australian culture', 'Aboriginal and Torres Strait Islander Australian' culture, or the culture of ethnic groups or social groupings within society, these aspects are not discussed here.

Cultural goods

Movable goods that cross Australia's customs frontier.

Cultural venues and events (children)

Refers to children's attendance at cultural venues and events outside of school hours and includes school excursions providing they were undertaken outside of school hours. It includes:

- public libraries (excluding school, university and other educational libraries)
- museums and art galleries
- performing arts events (including music concerts, drama productions, dance performances, operas and music theatre)
- school plays
- free performing arts concerts and community events.

Free Time

Time can be allocated into four categories: necessary time, contracted time, committed time, and free time. Free time is the amount of time left over when the previous three types of time have been taken out. Free time includes social and community interaction, and recreation and leisure.

Leisure

Leisure denotes activities undertaken by a person for enjoyment, refreshment, or relaxation. Leisure is normally associated with activities undertaken in 'free time', and leisure can be viewed as providing an opportunity to recover from pressures of work and other commitments, to bond with family and community members, to pursue interests and to reflect on life direction and meaning.

Main English speaking countries

Refers to the main countries from which Australia receives, or has received, significant numbers of overseas settlers who are likely to speak English. These countries comprise the United Kingdom and Ireland, New Zealand, Canada, the United States of America and South Africa.

Migrant

A person who was born overseas and obtained permanent Australian resident status prior to or after their arrival.

Motivators to sport participation

Reasons given for participating, sought from persons who participated 13 times or more in the 12 month period prior to the interview.

Organised sports and physical recreation

Those sports and physical recreation activities which were organised by a club or association. The club or organisation did not need to be a sporting body; it may have been a social club, church group, old scholars association or gymnasium. Persons may participate in more than one organised activity and also participate in non-organised activities.

Organised cultural activities (children)

Includes playing a musical instrument, singing, dancing and drama, outside of school hours. The activities include practising (organised or structured practice sessions only), having lessons and giving performances.

Participant (sport)

Those playing a sport or physically undertaking an activity. Persons involved solely as a coach, teacher, instructor, referee, umpire, administrator, club committee member are excluded from the data.

Participant rate (sport)

For any group, this is calculated by expressing the number of people who participated in an activity at least once during the year as a percentage of the population aged 18 years and over.

Regularity of sport participation

This is derived from data on the frequency of participation in all activities and the months of participation in all activities. The regularity items are subdivided into:

- Occasional participation - participated from 1-12 times and participated in from 1 to 12 months.
- Infrequent - part year participation - participated from 13-52 times and participated in from 1 to 11 months.
- Infrequent - full year participation - participated from 13-52 times and participated in each month.
- Frequent - part year participation - participated 53 times or more and participated in from 1 to 11 months.

months.

- Once or twice a week participation - participated from 53-104 times and participated in each month.
- More than twice a week participation - participated from 105 times or more and participated in each month.

Remoteness area

Within a state or territory, each Remoteness Area represents an aggregation of non-contiguous geographical areas which share common characteristics of remoteness, determined in the context of Australia as a whole. The delimitation criteria for Remoteness Areas are based on the Accessibility/Remoteness Index of Australia (ARIA). ARIA measures the remoteness of a point based on the physical road distances to the nearest Urban Centre. Not all Remoteness Areas are represented in each state or territory.

There are six Remoteness Areas in this structure:

- Major Cities of Australia;
- Inner Regional Australia;
- Outer Regional Australia;
- Remote Australia;
- Very Remote Australia;
- Migratory (not in-scope of the 2008 NATSISS).

Resources

Defined broadly to encompass the full range of cultural, human, financial, environmental, social and personal resources and capital utilised in participating in cultural and leisure activities.

Rest of Australia

This category comprises people usually resident in areas outside of the six state capital city Statistical Divisions, including all residents of the Northern Territory (except those in very remote areas) and the Australian Capital Territory.

Sports attendance

The question on sports attendance asked the respondent which sports (matches or competitions) they had been to as a spectator, during the previous 12 months. The respondent's own definition of sport was accepted. A sport was included regardless of whether the event was paid for or free of charge, or if it was attended at an overseas venue; but it was excluded if it was a school or junior sport. A limit of five sports could be listed. Due to under-reporting of some sports specific questions were asked about attendance at motor sports, harness racing, horse races and dog races.

Sport and physical recreation

The question on sport and physical recreation participation did not prompt for particular activities, and whether an activity was regarded as a sport or physical recreation was left to the opinion of the respondent. However, activities such as gardening, housework, manual labouring and other forms of occupational physical activity were excluded from the data.

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CULTURE AND LEISURE REFERENCES

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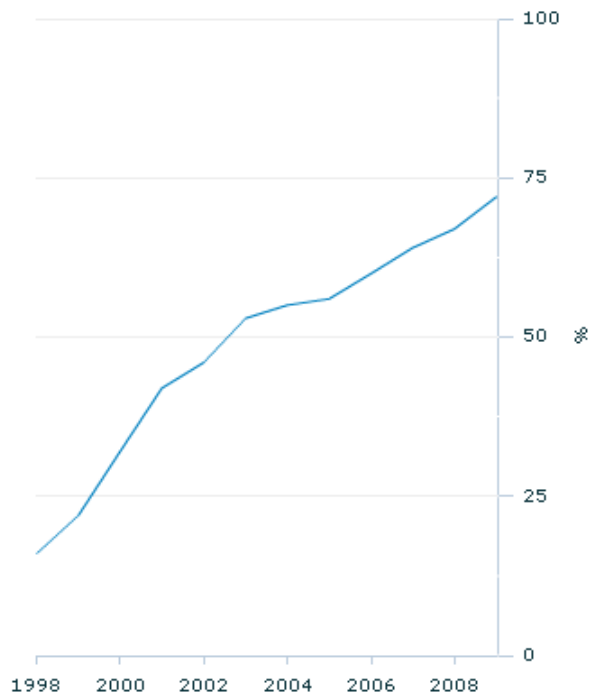
Communication

Communication, while not given headline status, has nevertheless been included as a supplementary dimension because of its relevance to whether life in Australia is getting better.

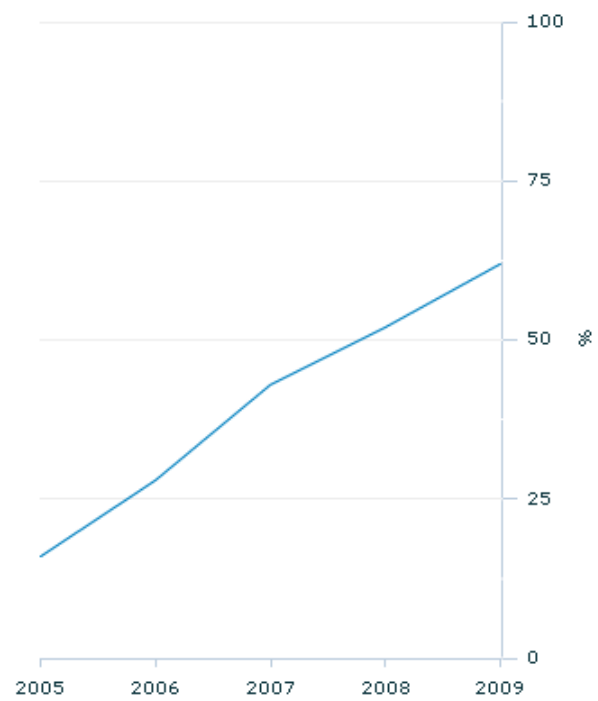
In 2008-09, 72% of Australian households had home Internet access, more than four times the proportion in 1998 (16%). The proportion of households with a broadband Internet connection increased from 16% in 2004-05 to almost two-thirds (62%) in 2008-09. For those households that had Internet access, 86% had a broadband connection in 2008-09.

Between 1998 and 2008-09, the proportion of households that had access to a computer increased from 44% to 78%.

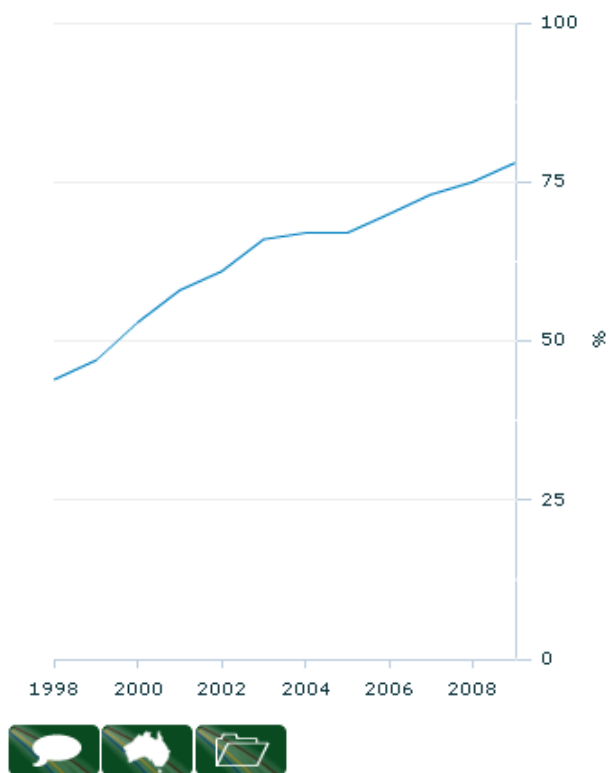
Household Internet access



Household broadband access



Household computer access



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Communication

COMMUNICATION AND PROGRESS

The communication of information, ideas and knowledge plays an important role in the way in which people live and do business. Australians are increasing their use of information and communication technology (ICT) and, in particular, are making more use of the Internet to purchase or order goods or services. Internet connectivity continues to expand rapidly in the Organisation for Economic Cooperation and Development (OECD) member countries.

Communication is not considered a headline dimension of progress but is considered a supplementary progress dimension because of its relevance to whether life in Australia is getting better. People who have access to the Internet are able to take advantage of an increasingly diverse range of online activities and they can communicate with a broader range of people. The Internet enables some people to work from home, and can help people stay in contact with family and friends.

Measures of communication that were useful ten years ago may be less contemporary today. For example, as personal computers are now the norm in households, simple measures of computer ownership may be of less relevance to whether life in Australia is getting better. On the other hand, as more business and communication is conducted via the Internet, being without a personal computer can leave an individual or family disadvantaged. In addition, more and more devices such as game consoles and television tuners (in addition to the proliferation of mobile devices) have access to the Internet, making access to a dedicated personal computer less necessary. New devices with different and overlapping functionality are being introduced to the market each year. More and more people are taking up wireless broadband which is portable and not fixed to a physical location such as a residence. The use of fixed or landline telephones is in decline while Internet Protocol (IP) phone calls are increasing.

This commentary focuses on the Internet as an increasingly important form of communication, looking at Internet access (including broadband access) and computer ownership. Further information is also provided on how ICT is used in making online purchases and in social networks. Internet security is also discussed, as is the use of ICT by older people, children, and people living in remote areas of Australia.

Information on the use of the Internet by businesses can be found in the Productivity section.

For a full list of definitions, see the Communication glossary.

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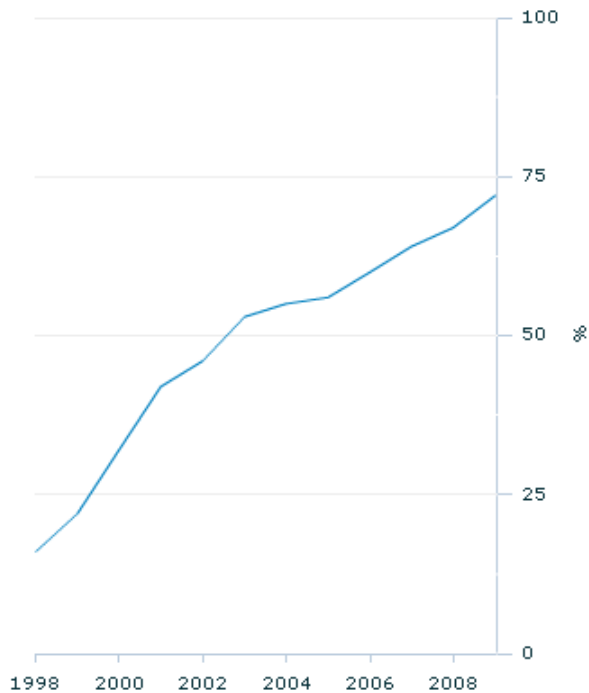
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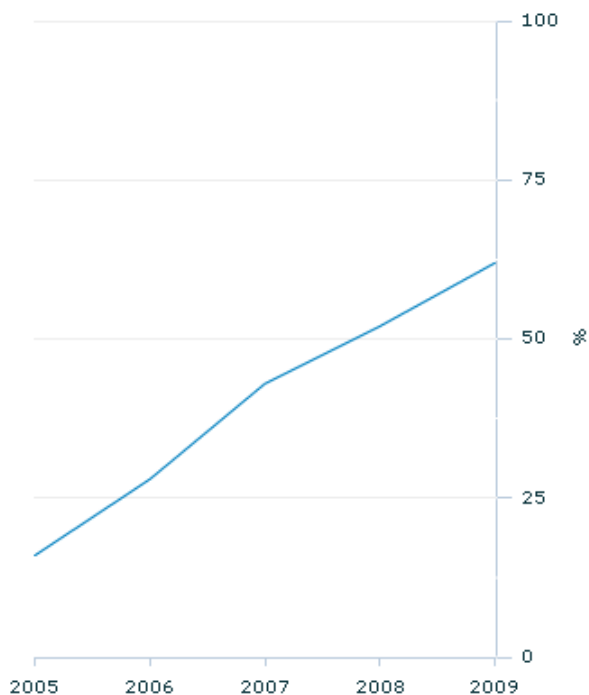
Household Internet access(a)(b)



Footnote(s): (a) Proportion of all households. (b) Year ending 30 June, with calendar year data for 2003 and earlier, and data interpolated for 2004.

Source(s): ABS Household Use of Information Technology, 2008-09 (cat. no. 8146.0)

Household broadband access(a)(b)



Footnote(s): (a) Proportion of all households. (b) Year ending 30 June.

HOME INTERNET

Access to the Internet at home improves the ability of individuals to stay in contact with family and friends, to belong to and communicate with like-minded groups, irrespective of their physical location. It allows access to a vast variety of up-to-date news, information, education, entertainment and government and business services that might not be available in another format. Home Internet access also facilitates telecommuting, thus enabling people to work from home while being connected to their workplace. In addition, the ability to conduct personal business outside of 'normal' working hours, or download entertainment, is increasingly being seen as essential. Not having access to the Internet at home could be considered a disadvantage.

Nearly three-quarters (72%) of Australian households had home Internet access in 2008-09, more than four times the proportion in 1998 (16%).

People's decision to connect to the Internet at home depends on a number of factors such as cost, interest in the Internet, availability of Internet service providers in their local area, available connection speed and ownership of a computer. The cost of computers and access to the Internet has reduced in recent years, while the speed of Internet connections and the availability of more diverse online activities has increased. This has widened the scope for Internet usage and, in turn, has increased the attractiveness of the Internet.

In 2004-05, more than two-thirds (70%) of households accessing the Internet at home had a dial-up connection, while less than one-third (29%) reported a broadband Internet connection. By 2008-09 the situation was reversed, with 86% of households accessing the Internet at home reporting a broadband connection, while only 12% reported a dial-up connection.

Just over two-thirds (68%) of Australians aged 15 years and over (11.6 million people) used the Internet at home in 2008-09. More than half (58%) of these used it at home every day, while 36% used it at least on a weekly basis and 5% used the Internet at least once a month. In comparison, in 2004-05 only 36% of people using the Internet at home did so every day, with 49% using it on a weekly basis, and 13% on a monthly basis.

People who were employed in 2008-09 were more likely to use the Internet at home (79%) than people who were not employed (50%) (ABS 2009a).

In 2008-09, use of the Internet was significantly higher than the average of 74% for those with the following characteristics: people aged 15-17 years (94%); people from households in the top two income quintiles (93% for the highest and 87% for the second highest); people with higher levels of educational attainment (93% for people with a bachelor degree or above); and the employed (85%). In contrast, Internet use was significantly lower among: older people (31% for people aged 65 years and over); people with lower household incomes (44% for people in the lowest quintile); people not employed (54%); and Aboriginal and Torres Strait Islanders (62%) (ABS 2009a).

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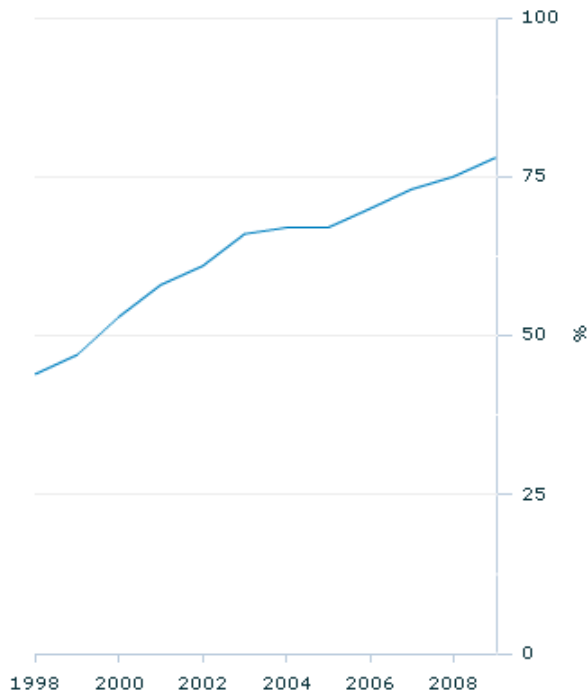
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Household computer access(a)(b)



Footnote(s): (a) Proportion of all households. (b) Year ending 30 June, with calendar year data for 2003 and earlier, and data interpolated for 2004.

Source(s): ABS Household Use of Information Technology, 2008-09 (cat. no. 8146.0)

HOME COMPUTERS

Home computers have become cheaper and more affordable over time, and as a result are becoming increasingly common in Australian households. In 2008-09, nearly four out of every five (78%) households in Australia had access to a home computer, compared with just over two out of every five (44%) households in 1998.

In 2008-09, households with children under 15 years of age had higher rates of computer access (91%) than those without children under 15 years (73%) (ABS 2009a).

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HOW DO WE USE THE INTERNET?

The growth and change in information and communications technology and the growth in Internet usage in recent years have been rapid and ongoing. This section looks at recent trends in Internet use including shopping online, the spread of social networking sites, and security issues.

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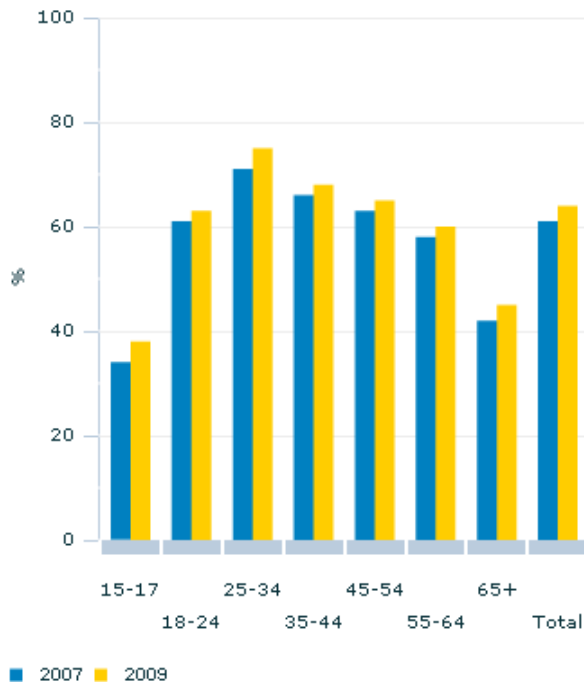
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Shopping online(a)(b) - by age



Footnote(s): (a) People who made purchases of goods or services for private purposes in the last 12 months as a proportion of all people who accessed the Internet. (b) Year ending 30 June.

Source(s): ABS Household Use of Information Technology, 2008-09 (cat. no. 8146.0)

SHOPPING ONLINE

Access to the Internet enables people to access or purchase information, goods and services regardless of location. However, concerns about security and privacy do exist.

In 2008-09, 64% of people aged 15 years and over who accessed the Internet used it to make online purchases, an increase from 2006-07 (61%). Younger adults aged 25-34 years were more likely to buy goods and services over the Internet than older people, with three-quarters (75%) doing so compared with less than half (45%) of people aged 65 years and over.

People on lower incomes were less likely to make online purchases. In 2008-09, only 54% of those with an income of less than \$40,000 made online purchases, compared to 85% of those with an income of \$120,000 or over.

People with higher educational qualifications were more likely to purchase goods and services online. In 2008-09 78% of people with a bachelor degree or above made online purchases, compared to 53% of people whose highest level of educational attainment was year 12.

In 2008-09, the most commonly reported main reason for not making online purchases was a lack of need (40% of people who did not make online purchases), followed by security concerns (18%) and preference for shopping in person (18%). For people aged 15-17 years, the main reason was a lack of a credit card (37%) followed by a lack of need (32%).

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SOCIAL NETWORKS

Information and communications technology (ICT) impacts on the communities in which we live and the way individuals, business, government and civil society interact and develop. As the use and impact of ICT increases, so does the prospect that ICT can influence community development and an individual's social networks (ABS 2004; DCITA 2005).

The Internet may be used to supplement existing social relationships by providing another means of communication. It allows people to keep in touch with established contacts and to disseminate information simultaneously to whole networks. (ABS 2004; DCITA 2005).

ICT may also provide access to new social networks by linking people to groups that are not bounded by geography. Examples include chat rooms, blogs, sites such as Facebook, Myspace, Twitter, dating sites and by subscribing to e-mail networks. These social networks have the potential to be particularly important for communities and groups isolated by geography or circumstance (ABS 2004; DCITA 2005).

However, while the Internet facilitates social relationships for many people, for others it may have the potential to diminish social relationships as it can draw them away from face-to-face contact with family and friends, thus reducing social participation and physical interaction. There is also concern that as global communication and involvement increases, interest in local community and politics decreases (DCITA 2005).

There are currently very little data available for rates of participation of Australian adults in social networks. However, this is not the case for children. Of the two million Australian children aged 5-14 years using the Internet at home in 2009, 22% visited or used social networking sites. The proportion was higher for older children aged 12-14 years (48%) compared to 11% for children aged 9-11 years and 3% for children aged 5-8 years (ABS 2009a).

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INTERNET SECURITY

The ability of individuals to feel confident about releasing personal information, such as credit card details, into the network, or authenticating and verifying the information that they access, is an issue of concern for many who use the Internet. Security threats such as computer viruses, identity theft, spam, spyware, phishing and other scams reduce user confidence and trust and can be costly to individuals. Lack of security discourages people from purchasing goods and services over the Internet (ACMA 2005).

Most Australians who use the Internet make some effort to protect themselves from internet security threats, possibly because many new computers tend to have protective software pre-installed. Australians who used computers at home in 2008 made extensive use of Internet security devices. Nearly all had antivirus software installed on their home computers, and most had anti-spam filtering and firewalls (AIC 2009a).

Exposure to illegal or harmful content is also a concern for users, particularly for households with children (ACMA 2005). See the Children and technology section for more information on Internet security issues relating to children.

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Communication

PROGRESS OF AUSTRALIANS

The Internet facilitates access to an increasingly diverse range of information and services, and communication with a broad range of people and organisations. The Internet also helps people to work from home or to stay in contact with family and friends.

Increasingly, some services require access to the Internet in order for them to be used. For example, some job applications must be submitted online, and some educational courses require work to be completed and/or submitted online. In addition, services such as banking or airline travel booking often impart a cost advantage to the consumer for using the Internet.

The notion of digital inclusion recognises that equitable Internet access is not just a matter of physical access to an Internet connected computer or digital device (ACMA 2005). Information technology skills and the capacity or even the willingness to use the Internet to access government, business and personal communications services are also important factors in an individual's level of participation in the information economy (ACMA 2005; DCITA, 2008).

As more services and activities become Internet based, groups with limited access or skills may not have the same opportunities as others to participate in social, economic and political life. Among a number of groups of interest are older people, people living in remote areas, and children.

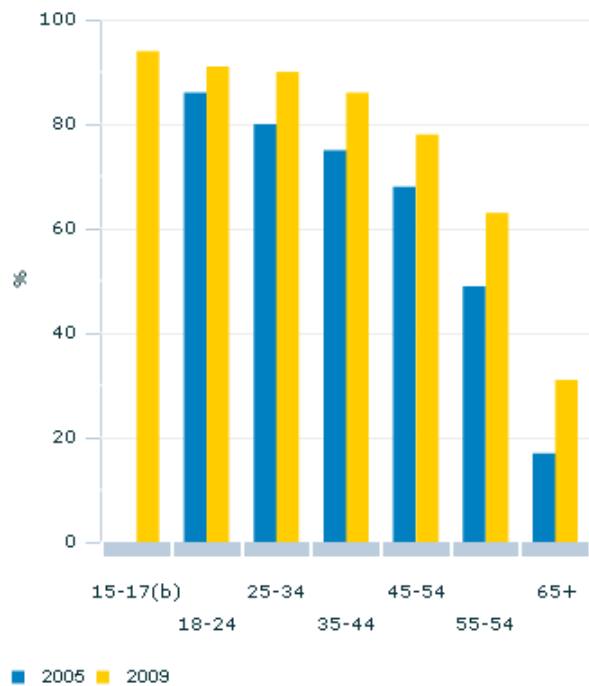
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Persons using the Internet(a)



Footnote(s): (a) Year ending 30 June. (b) Persons aged 15-17 years were excluded from the survey prior to 2005-06.

Source(s): ABS Household Use of Information Technology, 2008-09 (cat. no. 8146.0)

OLDER PEOPLE

Older people are less likely to use the Internet than any other age group. In 2008-09, just under one third (31%) of all people aged 65 years and over accessed the Internet, almost double the proportion in 2004-05 (17%).

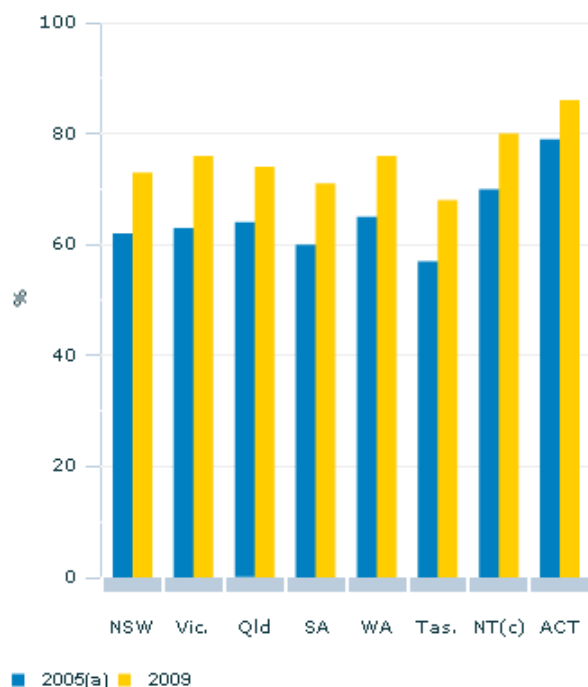
As older people are less likely to be in the work force, this means that they are less likely to have the opportunity to access the internet in a workplace, as many younger people do. In addition, they are also more likely to experience mobility problems that may restrict them from accessing services in person. Therefore the fact that older people are also less likely to use the Internet than younger people can exacerbate any existing disadvantages they might have.

As with younger people, the proportion of older people accessing the Internet has increased in recent years. People who are familiar with technology are now moving into the older age cohorts, while older people may be re-educating themselves to take advantage of new technology so that they can find information on the Internet and keep in touch with family and friends.

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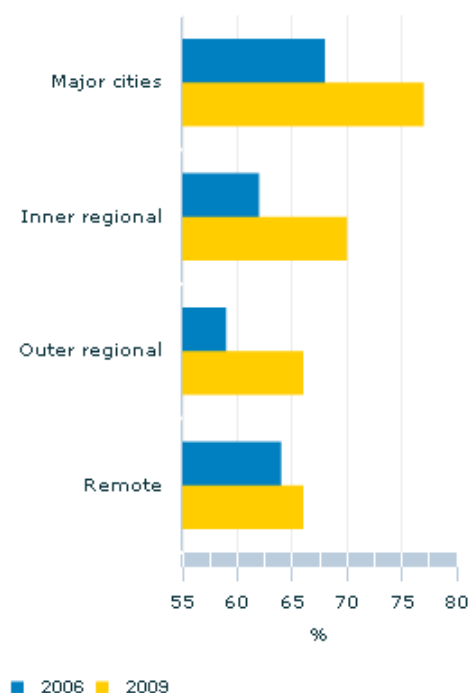
Persons using the Internet(a)(b)



Footnote(s): (a) Year ending 30 June. (b) Aged 15 years and over. (c) Data was not collected for people in very remote areas of Australia, which is likely to have had the most impact on Northern Territory estimates as a higher proportion of the population lives in very remote areas, and would be less likely to have Internet access.

Source(s): ABS Household Use of Information Technology, 2008-09 (cat. no. 8146.0)

Persons using the Internet - by remoteness area(a)(b)



Footnote(s): (a) Year ending 30 June. (b) Aged 15 years and over.

Source(s): ABS Household Use of Information Technology, 2008-09 (cat. no. 8146.0)

WHERE PEOPLE LIVE

People living in major cities of Australia are more likely to access the Internet (77% in 2008-09), than those in outer regional or remote Australia (66%).

People living in remote areas are less likely to have Internet access available that is both cheap and fast. This can compound the disadvantages of living in a remote area, as shops and businesses that are already too distant for convenient access in person may also not be accessible by Internet. Furthermore, multimedia websites may be unusable and the cost of using the Internet may be expensive even where the speed is adequate.

Of the states and territories, people living in the Australian Capital Territory were most likely to access the Internet (86% in 2008-09), and people in Tasmania were least likely (68%). This may in part be related to the fact that the Tasmanian population is relatively spread out across the State, while the ACT population is almost entirely urban, thus making the provision of services cheaper. Also of influence are the different characteristics of the ACT and Tasmanian population. Use of the Internet is significantly higher for young people, highly qualified people and employed people. Tasmania had the oldest population of all the states and territories, with a median age of 39.6 years, compared with 34.7 years in the ACT (at 30 June 2009). In 2009, 47% of 25-64 year olds in the ACT had a higher education qualification, compared to 21% of Tasmanians in the same age group (see Education and training for more information), and more ACT residents (aged 15 years and over) were employed in 2009 than residents of Tasmania (70% compared to 58% respectively) (ABS 2009c; see Work for more information).

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CHILDREN AND TECHNOLOGY

Most Australian children use the Internet, and many (especially older children) also have their own mobile phones - some of which can also be used to access the Internet. These technologies have created a new space in which children can learn, play and communicate. Increasingly, children use the Internet at school for class work, as well as at home. Lack of access to the Internet at home may be a disadvantage from a number of perspectives - school work, social interaction, and future employment prospects. The Internet is a place of both opportunity and risk where children can develop, but where they may also become the victims of crime or engage in illegal behaviour themselves (AIC 2009b), and as such, there are security concerns associated with children and their use of ICT.

The following sections discuss the prevalence of Internet usage and mobile phone ownership among children: what they use it for; safety and security issues affecting children when using these technologies; and the safety and security measures taken by parents or guardians to protect them.

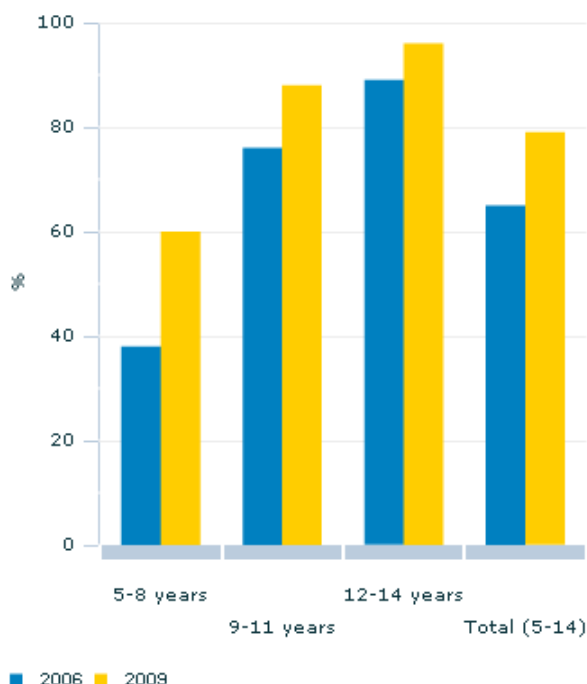
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Children accessing the Internet(a)



Footnote(s): (a) Proportion of all children in the relevant age group in the 12 months to April.

Source(s): ABS Household Use of Information Technology, 2008-09 (cat. no. 8146.0)

CHILDREN AND THE INTERNET

While most children use the Internet, those who do not are potentially disadvantaged. The increasing requirement for Internet access in order to complete school work, and the increased availability of home Internet services, have driven a sharp increase in the proportion of children accessing the Internet at both home and school.

In April 2009, nearly four out of every five (79%) children aged 5-14 years (2.2 million children) used the Internet, compared to 65% in April 2006 (1.7 million children). Home was reported as the most common site for Internet use in 2009 (92% of all children accessing the Internet) followed by school (86%) (ABS 2009a). Older children (aged 12-14 years) had the highest proportion of Internet usage in April 2009 (96%). Internet usage was 60% for children aged 5-8 years.

For children accessing the Internet at home in April 2009, educational activities (85%) and playing online games (69%) were the most common activities. Use of the Internet for general surfing or web browsing was reported by half (50%) of children, 47% of children listened to or downloaded music, and 36% used the Internet for emailing (ABS 2009a).

Internet usage was lowest for children with unemployed parents (69% for those in one parent families and 67% for those in couple families where the parent or parents were unemployed). Children living in major cities reported higher incidence of Internet access compared to children living in regional and remote parts of Australia (ABS 2009a).

In April 2009, few children who accessed the Internet in the previous 12 months were reported to have had some kind of personal safety or security problem on the Internet (3% or 72,000). This included problems such as accessing inappropriate material, experiencing bullying or threatening behaviour, or strangers asking for or gaining access to the child's personal information. Supervising or monitoring children's use of the Internet was the most common action taken by parents or guardians for personal

safety or security of children using the Internet at home (89%), followed by educating children about safe and appropriate use of the Internet (83%), placing the computer in a public area of the house (77%) and installing an Internet content filter (47%) (ABS 2009a).

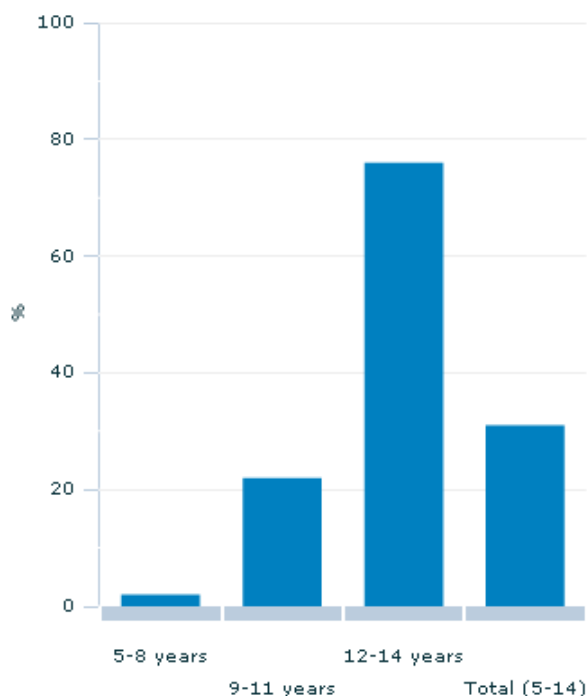
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Children owning mobile phones(a) - April 2009



Footnote(s): (a) Proportion of all children in the relevant age group.

Source(s): ABS Household Use of Information Technology, 2008-09 (cat. no. 8146.0)

CHILDREN AND MOBILE PHONES

Older children, children from one parent families, and children from families where the parent or parents are employed are more likely to have their own mobile phones than other children.

In April 2009, nearly a third (31%) of children aged 5-14 years had their own mobile phones (841,000 children), however for older children (aged 12-14 years) this proportion was much higher (76%). Children from one parent families were more likely to have their own mobile phone (38%) than children from couple families (29%), regardless of the age of the children. Mobile phone ownership was also higher for children where the sole parent (45%), or both parents (33%), were employed.

Over half of the children with mobile phones used it more to contact family (60%) than to contact friends (36%) and this was especially true for younger children. For children aged 5-8 years, almost all of them (95%) used their mobile phone more to contact family, while for older children (aged 12-14 years) just over half did (52%). Very few children with mobile phones used their mobile phones to access the Internet in April 2009.

Mobile phones enable instant direct communication between family members and friends, but their widespread use also gives rise to some security concerns. Phones may also have Internet capabilities and are, by their nature, less subject to direct adult supervision than home or school Internet access. Few children who owned mobile phones in April 2009 were reported to have had some kind of personal safety or security problem (3% or 28,000 children). These problems included bullying or threatening behaviour, receiving inappropriate material in text or media messages, and strangers asking for or gaining access to the child's personal information. Educating children about the safe and appropriate use of mobile phones was the most common action taken by parents or guardians for personal safety or security of children (81%), followed by monitoring children's mobile phone activities (53%) and blocking phone numbers or restricting services (22%).

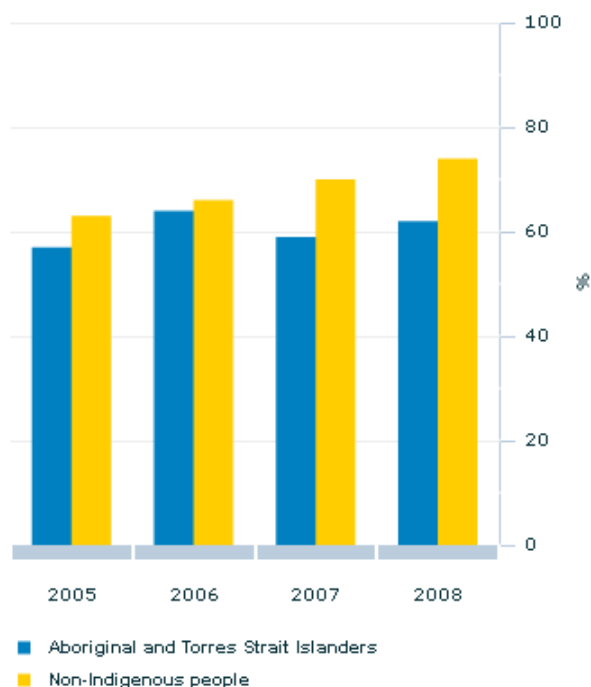
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Persons accessing the Internet(a)(b)



Footnote(s): (a) Year ending 30 June. (b) Aged 15 years and over. Data was not collected for people in very remote areas of Australia, which is likely to have had the most impact on Aboriginal and Torres Strait Islander estimates as a higher proportion of the population lives in remote areas, and would be less likely to have Internet access.

Source(s): ABS Household Use of Information Technology, 2008-09 (cat. no. 8146.0)

ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLES

Aboriginal and Torres Strait Islanders are less likely to have Internet access than non-Indigenous people. In 2008-09, 62% of Aboriginal and Torres Strait Islanders had access to the Internet compared with 74% for non-Indigenous people. This partly reflects the relative difference in socioeconomic status between Aboriginal and Torres Strait Islanders and non-Indigenous people, and also reflects the increased likelihood of Aboriginal and Torres Strait Islanders living in remote areas.

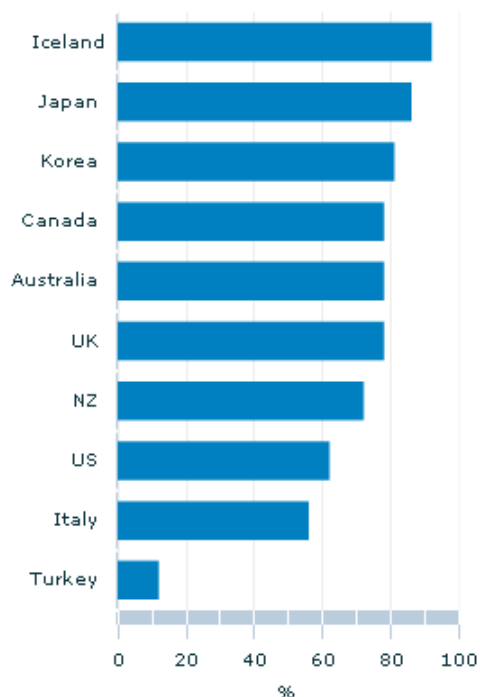
Employment and level of educational attainment also affect the uptake of Internet access (see the Home Internet section for more information). The unemployment rate for Aboriginal and Torres Strait Islanders was 17% in 2008, over four times the rate for non-Indigenous Australians, while only 40% of Aboriginal and Torres Strait Islanders aged 25-64 years had non-school qualifications compared with 61% of the non-Indigenous population (see Work for more information; ABS 2009b).

Some of the difference may also be attributable to the increased difficulty in accessing the Internet in remote areas, as Aboriginal and Torres Strait Islanders are much more likely than non-Indigenous people to live in remote areas (22% of Aboriginal and Torres Strait Islanders aged 15-64 years compared to 2% of non-Indigenous people in the same age group in 2009) (ABS 2010e).

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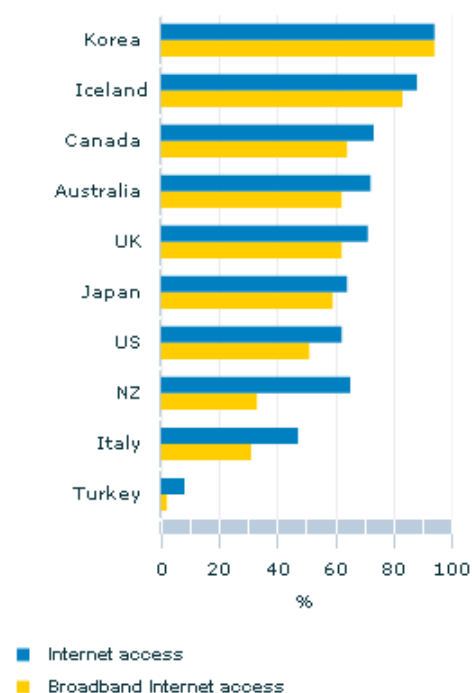
Household computer access(a) - selected OECD countries - 2008



Footnote(s): (a) Proportion of all households. See the Communication datacube for information about timing and scope differences between countries.

Source(s): ABS Household Use of Information Technology, 2008-09 (cat. no. 8146.0); OECD Key Information and Communication Technology (ICT) Indicators

Household Internet access(a) - selected OECD countries - 2008



Footnote(s): (a) Proportion of all households. See the Communication datacube for information about

timing and scope differences between countries.

Source(s): ABS Household Use of Information Technology, 2008-09 (cat. no. 8146.0); OECD Key Information and Communication Technology (ICT) Indicators

INTERNATIONAL COMPARISONS

Korea had the highest proportion of households with Internet and broadband Internet access (94% each) in 2008. Turkey had the lowest, with 8% of households having Internet access, and 2% with broadband Internet access. Only 12% of Turkish households had access to a home computer.

Australia, Canada and the United Kingdom had very similar levels of home computer access (78%), Internet access (about 72%) and broadband Internet access (about 62%).

Japan had a higher proportion than Australia of households with access to a home computer (86% compared to 78% in Australia), but lower proportions of households with access to the Internet (64% and 72%), or with broadband access (59% and 62%).

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Communication

LINKS TO OTHER DIMENSIONS OF PROGRESS

The Internet and other information and communication technology influence nearly all aspects of modern life.

Access to the Internet and the use of online services enhances educational, work and social opportunities, as well as financial, banking, wholesale and retail services for an increasing number of people. Some people telecommute using the Internet to communicate with colleagues and clients. Increased business use of the Internet in turn increases the opportunities for individuals. Business use of the Internet is discussed in the Productivity section.

The Internet is one of a number of cultural and leisure activity outlets available to people today, and also provides an outlet for creativity and personal, social and political expression.

See also the sections linked below.

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COMMUNICATION GLOSSARY

Accessibility/Remoteness Index of Australia (ARIA)

Accessibility/Remoteness Index of Australia (ARIA) was developed by the Commonwealth Department of Health and Aged Care (DHAC) and the National Key Centre for Social Applications of Geographic Information System (GISCA). ARIA measures the remoteness of a point based on the physical road distance to the nearest Urban Centre (ASGC 1996) in each of five size classes: Major Cities of Australia; Inner Regional Australia; Outer Regional Australia; Remote Australia; and Very Remote Australia. Each 1km square area is given an ARIA index value. ARIA index values are averaged across Census Collection Districts (CDs), which are then aggregated up into the six ABS Remoteness areas based on the averaged ARIA index. See 'ASGC Remoteness structure'.

ASGC Remoteness structure

The Remoteness structure is used for the production of standard ABS statistical outputs from Population Censuses and some ABS surveys. It is a structure describing Australia in terms of a measurement of remoteness. The Remoteness structure includes all Collection Districts (CDs) and therefore, in aggregate, it covers the whole of Australia. The purpose of the structure is to classify CDs which share common characteristics of remoteness into broad geographical regions called Remoteness Areas (RAs). There are six RAs in this structure: Major Cities of Australia; Inner Regional Australia; Outer Regional Australia; Remote Australia; Very Remote Australia; and Migratory. See 'Accessibility/Remoteness Index of Australia (ARIA)'.

Broadband

Broadband access is defined by the ABS as an 'always on' Internet connection with an access speed equal to or greater than 256 Kilobits per second (Kbps). It provides much faster access to the Internet than other services such as dial-up modems. Most other OECD countries define broadband in terms of technology (e.g. ADSL, cable etc) rather than speed.

Employed

Employed persons include all persons aged 15 years and over who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (comprising employees, employers and own account workers); or worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or
- were employees who had a job but were not at work and were:
 - away from work for less than four weeks up to the end of the reference week; or
 - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week; or
 - away from work as a standard work or shift arrangement; or
 - on strike or locked out; or
 - on workers' compensation and expected to return to their job; or
- were employers or own account workers, who had a job, business or farm, but were not at work.

Household

A group of one or more persons in a private dwelling who consider themselves to be separate from other persons (if any) in the dwelling, and who make regular provision to take meals separately from other persons, i.e. at different times or in different rooms. Lodgers who receive accommodation but no meals are

treated as separate households. Boarders who receive both accommodation and meals are not treated as separate households. A household may consist of any number of families and non-family members.

Indigenous

This refers to people who identified themselves, or were identified by another household member, as being of Aboriginal and/or Torres Strait Islander origin.

Information and Communication Technology (ICT)

Information and Communication Technology refers to the technologies and services that enable information to be accessed, stored, processed, transformed, manipulated and disseminated, including the transmission or communication of voice, image and/or data over a variety of transmission media.

Inner Regional Australia

Inner Regional Australia is a category in the ASGC Remoteness Structure. Inner Regional Australia is defined as 'CDs with an average ARIA index value greater than 0.2 and less than or equal to 2.4'.

Internet

A world-wide public computer network. Organisations and individuals can connect their computers to this network and exchange information across a country and/or across the world. The Internet provides access to a number of communication services including the World Wide Web and carries email, news, entertainment and data files.

Internet access

Availability of lines, points, ports, and modem to subscribers to access the Internet.

Internet use

This refers to the use of the Internet in the 12 months prior to interview. It includes access via mobile phones, set-top boxes connected to either an analogue or digital television, and games machines.

Major Cities of Australia

Major Cities of Australia (not to be confused with Major Urban) is a category in the ASGC Remoteness Structure. Major Cities of Australia is defined as 'CDs with an average ARIA index value of 0 to 0.2'. The 'Major Cities of Australia' class includes most capital cities, as well as major urban areas such as Newcastle, Geelong and the Gold Coast.

Not employed

Refers to a combination of those people who are unemployed or not in the labour force. See Work glossary for full definitions of 'unemployed' and 'not in the labour force'.

One-parent family with children

A family consisting of a lone parent and at least one child aged 5-14 years usually resident in the household. The family may also include any number of other dependents, non-dependents and other related individuals.

Outer Regional Australia

Outer Regional Australia is a category in the ASGC Remoteness Structure. Outer Regional Australia is defined as 'CDs with an average ARIA index value greater than 2.4 and less than or equal to 5.92'. Outer Regional Australia includes towns and cities such as Darwin, Whyalla, Cairns and Gunnedah.

Remote Australia

Remote Australia is a category in the ASGC Remoteness Structure. Remote Australia is defined as 'CDs with an average ARIA index value greater than 5.92 and less than or equal to 10.53'. Examples of Remote Australia include Alice Springs, Mount Isa and Esperance.

Shopping online

People who made purchases of goods or services for private purposes in the last 12 months.

Teleworking/telecommuting

Teleworking includes work taking place away from the traditional office which is facilitated by the use of information and communication technologies on a full-time, part-time or temporary basis.

Very Remote Australia

Very Remote Australia is a category in the ASGC Remoteness Structure. Very Remote is defined as 'CDs with an average ARIA index value greater than 10.53'. Very Remote Australia represents much of central and western Australia and includes towns such as Tennant Creek, Longreach and Coober Pedy. This region is excluded from the following ABS surveys: the Multipurpose Household Survey; the Children's Participation in Cultural and Leisure Activities survey; and the Time Use Survey.

Wireless

Wireless access technologies are grouped according to whether they enable fixed or mobile access.

- Fixed wireless is a point to point microwave link, generally building to building or tower to building which allows subscribers within the receiving building to access the Internet. Sender and receiver must be within line of sight and no more than 22 kilometres apart, for example, WiFi, fixed WiMAX, LMDS, MMDS.
- Mobile wireless provides short range high data rate connections between mobile data devices and access points connected to a network, for example: mobile WiMAX; 3G via datacard or USB modem; but excludes Internet connections through mobile handsets.

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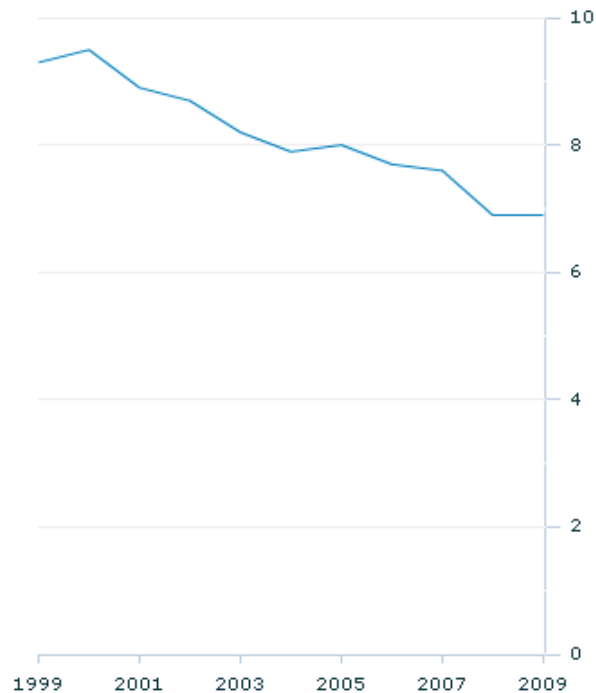


Transport

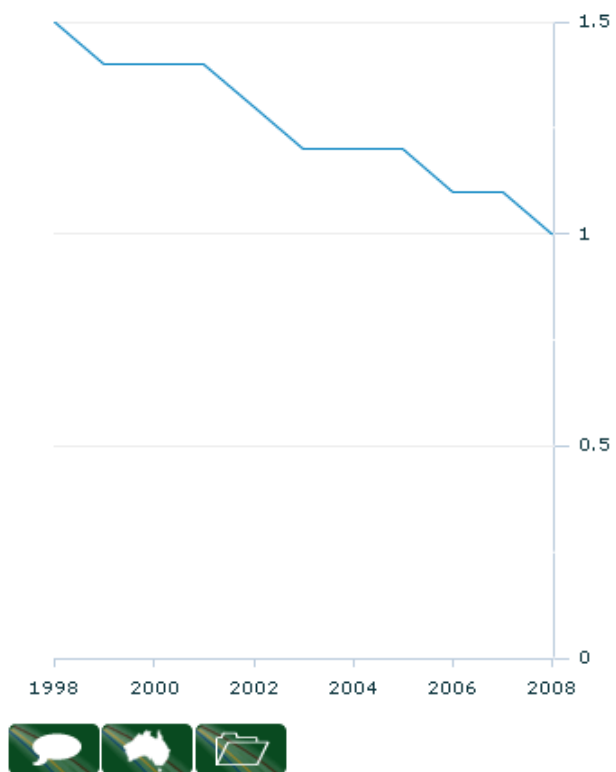
Transport, while not given headline status, has nevertheless been included as a supplementary dimension because of its relevance to whether life in Australia is getting better.

Road fatality rates in Australia have continued to decline in the past decade. In 2009, there were an average 6.9 road fatalities per 100,000 people in Australia, a fall from 9.3 per 100,000 in 1999.

Road deaths per 100000 people



Road deaths per 10 000 registered vehicles



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TRANSPORT AND PROGRESS

Many aspects of transport relate to whether life in Australia is getting better. Transport helps people access goods and services and can provide people with more freedom about where they choose to work, live and spend free time.

Transport, while not considered a headline dimension of progress, is considered a supplementary dimension because of its relevance to whether life in Australia is getting better. It is difficult to develop a single indicator reflecting progress in the transport sector. An ideal measure might focus on whether people have access to efficient and affordable transport. Within our major cities an indicator might look at access to adequate public transport networks or uncongested roads. In rural areas an indicator might focus on whether the roads are in good condition or whether those who need a car can afford to own and use one. But whether transport is acceptable or affordable is a matter of personal opinion and is a difficult concept to measure. Even if data were available, there is no obvious way in which these aspects could be combined into a single meaningful indicator.

This commentary focuses on road fatalities and access to motor vehicles. Road fatality data, while limited in the scope of progress it measures, does provide an indication of whether road transport safety in Australia is improving. Statistics on motor vehicle registrations and motor vehicle use are also important as they describe how access and use of cars are changing over time. Additional information is included on air, rail and sea transport, fuel consumption, and greenhouse gas emissions to provide extra context to transport and progress.

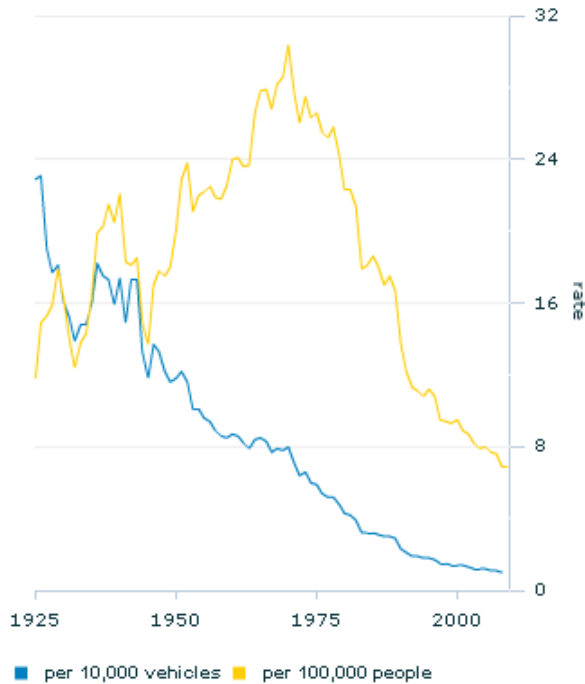
For a full list of definitions used, see the Transport glossary.

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Road deaths in Australia



Source(s): BITRE, Road Deaths in Australia 1925-2008; BITRE, Road Deaths Australia February 2010

ROAD SAFETY

Road safety is an important indicator of progress. Improved road safety may reduce the accidental death or injury of drivers, passengers and bystanders.

Considerable effort has been made in Australia to reduce deaths and injuries from motor vehicle accidents. This has included the introduction of compulsory seat belt requirements; installation of red light and speed cameras; improving the design of roads and vehicles (including airbags); strengthening and enforcing the laws governing road use; and increasing public awareness of road safety. As a result, the number of road accident fatalities has declined over the last four decades despite population growth and increased motor vehicle use.

At its peak in 1970, Australia recorded 3,798 road fatalities for the year. This figure more than halved to an annual average of 1,641 road deaths between 2000 and 2008, and by 2008 this figure had declined further to 1,465 road fatalities for the year. The number of road accident fatalities per capita during this time fell more significantly, from a peak of 30.4 per 100,000 people in 1970 to 6.9 in 2009.

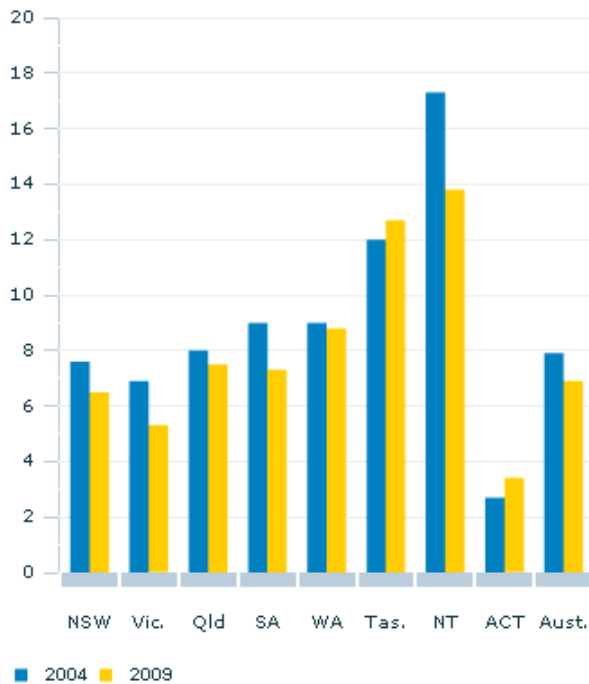
Less information is available about the significant number of people seriously injured in road accidents. In 2006, it was estimated that 20 people were seriously injured for every recorded road death in Australia. This statistic is important as it represents social and economic burdens for the individuals and families involved (BITRE 2008).

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Road deaths per 100 000 people



Source(s): BITRE, Road Deaths Australia February 2010

STATE AND TERRITORY DIFFERENCES

In 2009, road fatalities per capita ranged from 13.8 per 100,000 people in the Northern Territory to 3.4 per 100,000 people in the Australian Capital Territory.

Between 2004 and 2009, road fatalities per capita declined in all states and territories with the exception of Tasmania and the Australian Capital Territory where small increases were recorded.

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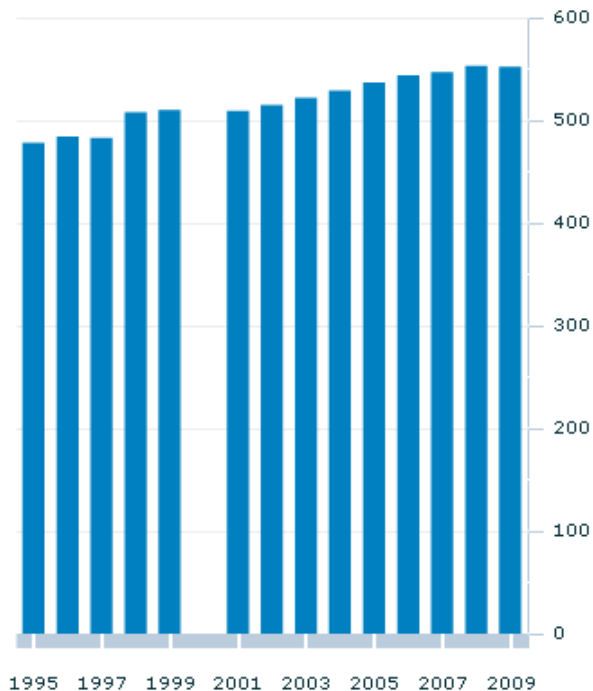
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Transport

Passenger vehicles per 1000 people(a)



Footnote(s): (a) Timing and frequency of census varies prior to 2001. Census not conducted in 2000. For more information, see the Transport datacube.

Source(s): ABS Motor Vehicle Census, Australia (cat. no. 9309.0)

PASSENGER VEHICLES

Motor vehicles are Australians' primary means of transportation, with car ownership being important to people's mobility. Levels of car ownership can be affected by many factors including incomes, interest rates, car prices and demographic trends. For example, as cars are often shared within a household, an increase in single person households may boost car numbers.

In March 2009, there were over 12 million registered passenger vehicles in Australia, a rise from around 9.7 million in 1999. In 2009, passenger vehicles comprised just over three-quarters (77%) of Australia's vehicle fleet, with the remainder (a further 3.7 million vehicles) being accounted for by campervans, trucks, buses, motorcycles and light commercial vehicles.

Although the number of motorcycles registered grew by 58% over the last five years, passenger vehicles still remained Australia's favoured vehicle type. By 2009, there was just over one passenger vehicle for every two Australians - 552 passenger vehicles for every 1,000 people, up from 510 vehicles per 1,000 people in 1999.

For the year ended October 2007, passenger motor vehicles (including campervans) travelled a total distance of 158 billion kilometres, a rise from 148 billion kilometres in 2004. This equated to each Australian passenger vehicle covering an average distance of 13,700 kilometres. Notably, 29% of the total kilometres travelled by passenger vehicles in Australia during the year was covered in trips to and from the workplace (ABS 2007). When and whether people use their cars often depends in part on the anticipated levels of congestion, the price of fuel, and the availability, affordability and convenience of alternative transport.

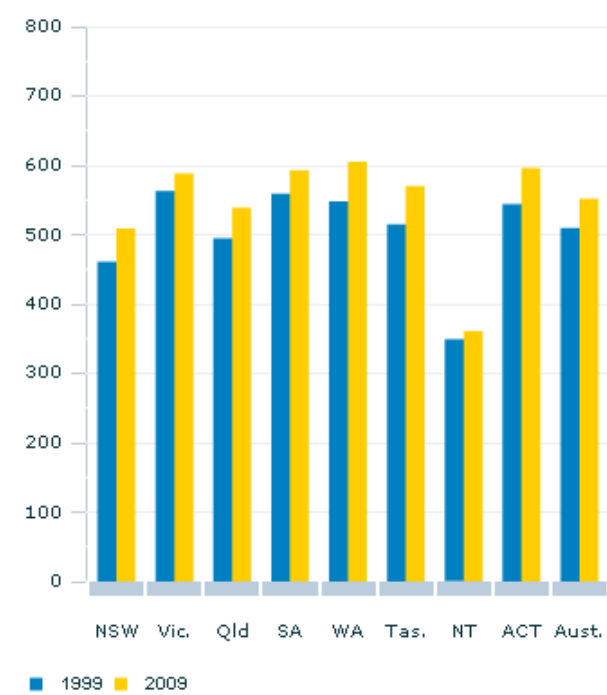
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Passenger vehicles per 1000 people



Source(s): ABS Motor Vehicle Census, Australia (cat. no. 9309.0)

STATE AND TERRITORY DIFFERENCES

In 2009, the highest rate of passenger vehicle registrations was in Western Australia with 605 passenger vehicles per 1,000 people. This was followed by the ACT, South Australia and Victoria with around 590 passenger vehicles per 1,000 people. By comparison, the Northern Territory reported the country's lowest level of passenger vehicle registrations with an average of 361 passenger vehicles per 1,000 people.

In 2007, passenger vehicles registered in Victoria travelled the farthest (on average 14,300 kilometres a year), while passenger vehicles registered in South Australia recorded the lowest average distance travelled (11,500 kilometres) (ABS 2007).

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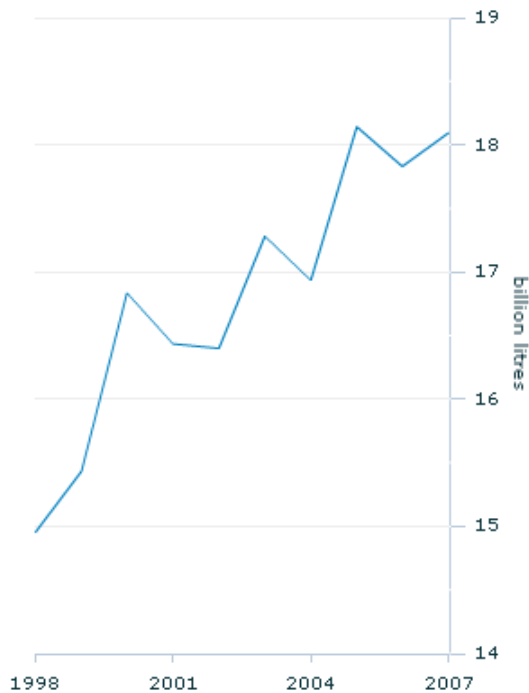
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Transport

Total fuel consumption by passenger vehicles(a)



Footnote(s): (a) Includes petrol, diesel, LPG/CNG/dual fuel and for 2007 hybrid. Data for LPG/CNG/dual fuel not published in 2000 and 2001.

Source(s): ABS Survey of Motor Vehicle Use (cat. no. 9208.0)

FUEL CONSUMPTION AND EMISSIONS

The combustion of fossil fuels by motor vehicles is a significant contributor to Australia's greenhouse gas emissions. Australia's most recent national greenhouse gas inventory provided data for the years 1990 to 2008. During this period the transport sector's total greenhouse gas emissions increased by 29%. In 2008 the transport sector accounted for 15% of total greenhouse gases emitted excluding land use, land-use change and forestry (80.2 million tonnes) (DCCEE 2010). Road transport was the main source of transport emissions in 2008, accounting for 86% of all transport emissions, or 12.6% of national emissions (DCCEE 2009).

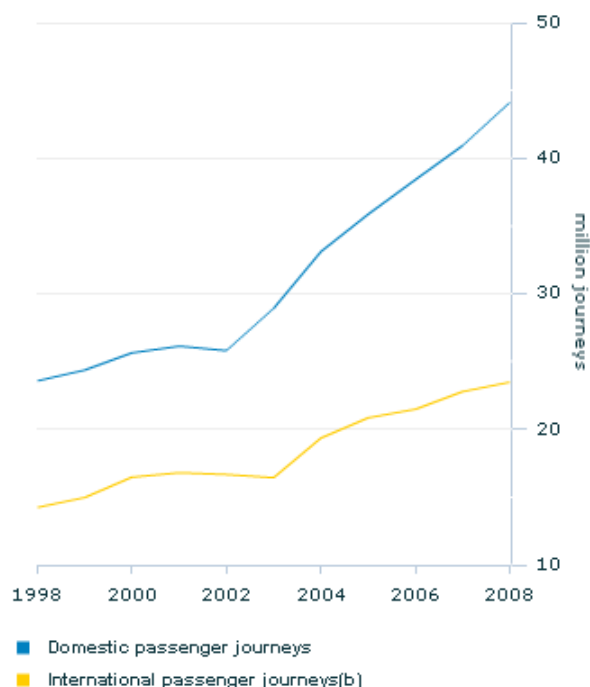
For every litre of petrol used, 2.3kg of carbon dioxide is released. For diesel, this figure rises to 2.7kg but is significantly lower for LPG (1.6kg) (DEWHA 2008). From 1998 to 2007, fuel consumption by passenger vehicles increased from 15.0 billion litres to 18.1 billion litres. In 2007, 88% of the fuel consumed was petrol, 5% was diesel and 7% was LPG, reflecting a relatively similar pattern over the 10 year period (ABS 2007).

While new vehicles are considerably more fuel efficient than older vehicles, the average fuel consumption by passenger vehicles remained at around 11.5 litres per 100 kilometres between 1998 and 2007. This is in part due to the relatively slow drop in the average age of passenger vehicles which has inhibited efficiency gains. In 1999, the average age of passenger vehicles was 10.3 years, while in 2009 this figure was 9.7 years (ABS 2009).

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Passenger journeys by air(a)



Footnote(s): (a) The unit of measurement is traffic on board (which includes transit traffic). Includes revenue passengers only. (b) Includes arrivals to, and departures from Australia.

Source(s): BITRE, Domestic airline industry annual summaries 1944 to 2008 and 1944-45 to 2008-09; BITRE, Annual totals (flights, passengers, freight and mail)

RAIL, SEA, AIR AND FREIGHT

Rail, sea and air transport are all important in Australia. Rail and light rail (trams) move a considerable number of passengers within urban areas. In 2007-08, 711.3 million passenger rail journeys occurred in Australia's urban areas, a 19% increase from 2002-03 figures. The continual increase in passenger journeys from 2002-03 to 2007-08 reflects a growth in population, increased CBD employment, rising fuel prices and increased services.

Rail also carries a good deal of Australian freight. In 2007-08, 719.1 million tonnes of freight were moved by rail, a 25% increase from 575.7 million tonnes moved in 2002-03. Much of the growth in freight tonnes moved during this time is attributable to an increase in the trade and transport of iron ore and coal (ARA 2009).

Sea transport focuses on the long distance movement of bulk commodities, such as metal ores, petroleum and coal. In 2007-08, 119.3 million tonnes of coastal freight moved across Australian wharves, a 24% increase on 1998-99 when 96.5 million tonnes were moved. In 2007-08, 789.6 million tonnes of international freight were moved, representing a 62% increase from 1998-99 (when 488.1 million tonnes were moved) (BITRE 2009b).

Air transport complements other transport modes by transporting people and freight over long distances in shorter times. Over the decade from 1998 to 2008, the number of domestic passenger journeys nearly doubled, increasing from 23.6 million to 44.1 million. This was reflected in the number of passenger kilometres travelled, increasing from 26.8 billion to 54.1 billion kilometres (BITRE 2009c). During the same decade the number of international passenger journeys both to and from Australia also increased, rising from 14.2 million in 1998 to 23.5 million in 2008. The only year-to-year decreases recorded for international passenger journeys to and from Australia were 2001 to 2002 and 2002 to 2003, and can

most likely be attributed to the September 2001 terrorist attacks and the international SARS outbreak (BITRE 2009a).

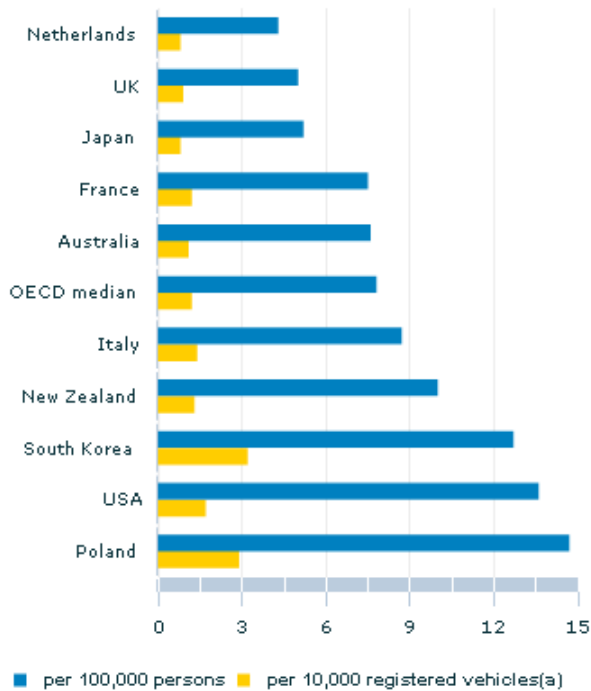
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Road fatalities in OECD nations - 2007



Footnote(s): (a) 2006 for USA, 2004 for Italy.

Source(s): DITRDLG, International Road Safety Comparisons: The 2007 Report

INTERNATIONAL COMPARISONS

Australia, along with many western countries, has worked hard to reduce deaths and injuries from motor vehicle accidents. In 2007, Australia was ranked 14th safest amongst 29 OECD nations in regards to road deaths per capita, with a figure of 7.6 road fatalities per 100,000 people. This figure was lower than nations such as Poland (14.7 per 100,000), the United States (13.6 per 100,000) and New Zealand (10.0 per 100,000), and lower than the OECD median of 7.8. However, Australia still recorded more fatalities per capita than the Netherlands (4.3 per 100,000) and the United Kingdom (5.0 per 100,000) which were amongst the safest nations in the OECD. Between 1995 and 2007, the OECD median road fatality rate per capita decreased by 36.5%.

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LINKS TO OTHER DIMENSIONS OF PROGRESS

Access to transport helps to determine where people work and what goods and services they can purchase or access. However, motor vehicles remain the largest single source of fine particle air pollution and a considerable contributor to greenhouse gas emissions.

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TRANSPORT GLOSSARY

Greenhouse gases

The atmospheric gases responsible for causing global warming and climate change. Carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride are the major greenhouse gases.

LPG

Liquid petroleum gas

Motorcycles

Two and three wheeled motor vehicles constructed primarily for the carriage of one or two persons. Included are two and three wheeled mopeds, scooters, motor tricycles and motorcycles with sidecars.

Passenger journey (rail)

A journey made by a passenger, all or part of which was on a train or light rail vehicle. For urban regions, a journey is a point-to-point trip irrespective of the number of vehicles or modes used for the trip. For non-urban travel, a journey is a point-to-point trip but each change of vehicle along the route is counted as a separate journey.

Passenger kilometres

Passenger kilometres is the number of kilometres travelled by vehicle multiplied by the number of occupants in the vehicle. It applies to air, sea, rail and road transportation.

Passenger vehicles

Motor vehicles constructed primarily for the carriage of persons and containing up to nine seats (including the driver's seat) are defined as passenger vehicles. Included are cars, station wagons, four-wheel drive passenger vehicles and forward-control passenger vehicles. Campervans are included in data pertaining to fuel consumption, and average and total distances travelled, but excluded in all other cases.

Registered passenger vehicles

Registered passenger vehicles are defined as those vehicles registered at the date of the Motor Vehicle Census (31 March for years 2001-2009, various times for years prior), or had registration expire less than one month before that date. Motor vehicle registration statistics are derived from data made available by various state and territory motor vehicle registration authorities and reflect the information as recorded in registration documents. Certain vehicles are not included in registration statistics. These include some recreational vehicles intended for off-road use such as trail bikes and sand dune buggies, diplomatic or consular vehicles, vehicles registered by the defence force, and some vintage and veteran vehicles.

Road accident fatalities

A road death is defined as the death of any person within 30 days of a road vehicle accident where death is attributable to injuries sustained during the accident. Note that fatalities in the Northern Territory between the years 1925 and 1961 are excluded from road accident fatality statistics.

Total distance travelled

The total distance travelled is the estimated cumulative distance covered by all registered Australian vehicles. It is an estimated figure that combines motor vehicle registration statistics with statistics from the

Survey of Motor Vehicle Use, an ABS study examining motor vehicle use in a sample of 16,000 vehicles.

Vehicle kilometres

The distance covered by a single vehicle regardless of the number of occupants within.

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TRANSPORT REFERENCES

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Economy

The economy is a system of markets (e.g. goods, money, labour markets) which can be affected by market controls (eg, taxes and interest rates). These together generate production, stimulate consumption, and balance economic activities, so that Australia's population has access to income and wealth (in the form of assets) and the opportunity to consume goods and services. The more productive, or efficient the economy is, the more income, wealth and consumption possibilities are available. Higher production may also assist the economy to be resilient in the face of international economic shocks.

The productive capacity of the economy is often measured by Gross Domestic Product (GDP), which indicates the extent of production and consumption in the economy. GDP can also be taken as a measure of the competitiveness of the Australian economy. However, GDP is not directly related to wellbeing, rather it is a measure that measures the growth of the economy per se.

Theoretically, a productive economy means that more economic resources are available to all people. However, the wellbeing of society is more directly indicated by looking at the standard of living of individuals and families.

Having high income or reserves of wealth extends the range, quantity and quality of goods and services that can be consumed, and can indicate life success. Perhaps more importantly, people with limited resources can experience hardship in meeting the basic costs of living and may become dependent on others to have such needs met.

The effective distribution of income and wealth is therefore crucial in understanding whether all members of society have sufficient economic resources for basic needs such as housing, clothing and food. Productivity growth, achieved, for instance, by increasing production from workers or capital investment, is intended to support this distribution by improving living standards, resulting in more income available to be distributed.

In this commentary, economic progress equates to enhancing Australia's national income (broadly Australians' real per capita levels of consumption) while at least maintaining (or possibly enhancing) the national wealth that will support future consumption.

The headline dimensions that help Australians to assess whether our economy has improved include:

- National income
- National wealth
- Household economic wellbeing
- Housing
- Productivity
- Inflation
- Competitiveness and openness

While not given headline status, 'Inflation' and 'Competitiveness and openness' have also been included supplementary dimensions because of their relevance to whether life in Australia is getting better.

National income

National income reflects Australians' capacity to purchase goods and services, and is a key determinant of material living standards. A rise in real income means not only a rise in the capacity for current consumption, but also increased ability to accumulate wealth (e.g. houses, machinery, financial assets), which may be used to generate future income and support future consumption.

National wealth

Along with the skills of the work force, a nation's wealth (in the form of economic assets) effects its capacity to generate income, and provides it with resilience to withstand economic shocks that affect income. For example, economic assets generate income when used in manufacturing (such as machinery and equipment), when extracted or harvested (such as minerals or crops), or when they return income

flows to Australia (e.g. financial assets). Other assets, such as owner-occupied dwellings, provide consumption services direct to their owners.

Household economic wellbeing

The household economic wellbeing dimension reflects the principle that people should have access to some minimum material standard of living . This is largely determined by a household's command over its economic resources and its capacity for consumption of goods and services. Households with low income may be less likely to be able to support an acceptable standard of household economic wellbeing.

A rise in household income indicates there is more disposable income to spend on needs, wants and accumulate wealth. A drop in household income puts more pressure on household budgets, and may lead to the consumption of accumulated wealth.

Housing

Housing provides people with shelter, security and privacy, and having an adequate and appropriate place to live is fundamental to people's wellbeing. People who live in higher income households may have a wide range of housing choices, including having the choice to purchase a home. For people living in low income households, a primary concern may simply be access to shelter, so, for these people, housing affordability becomes a more fundamental wellbeing issue. The number of people experiencing housing difficulties can also represent flow on costs to the wider society in the form of lost community cohesion and increased costs of community services.

Productivity

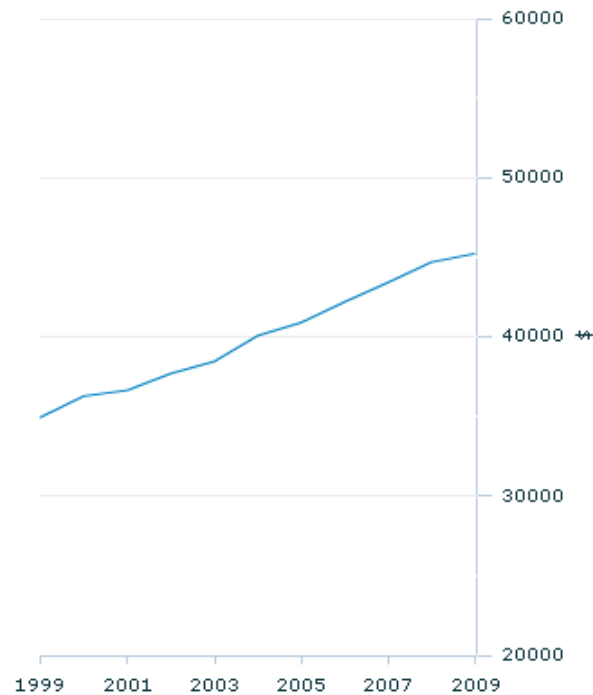
Productivity is an important measure of economic progress. Improvements in productivity mean the economy is using resources, such as capital, labour, energy or materials, more efficiently. While education and training improve the quality of the labour force over time, and are a key input into productivity, lack of innovation, research, development, or investment in assets can reduce productivity and thus Australia's ability to compete in the international market.

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National income



Real net national disposable income(a) per capita(b)

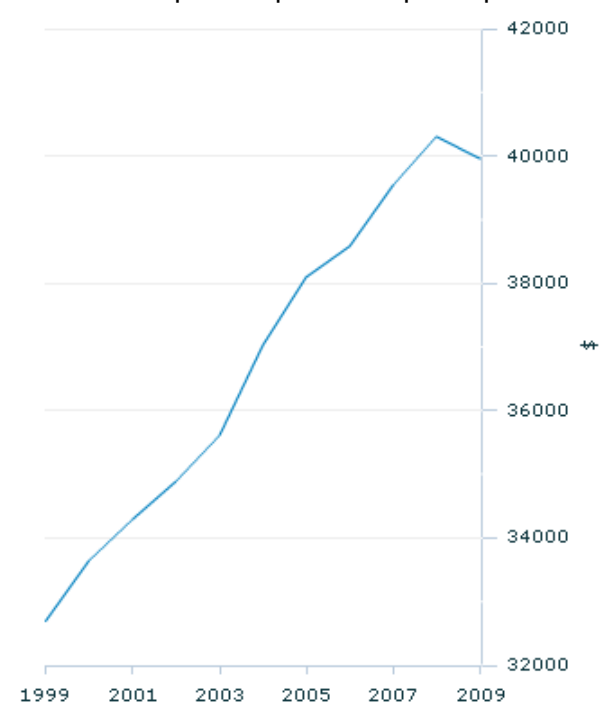
Australia experienced significant real per capita income growth during the past decade, from \$35,000 in 1999 to \$45,300 in 2009 (in 2007-08 prices).

Between 1998-99 and 2008-09, real net national disposable income per capita grew by 2.6% a year - appreciably faster than during the preceding ten years, when it grew by 1.5% per year.

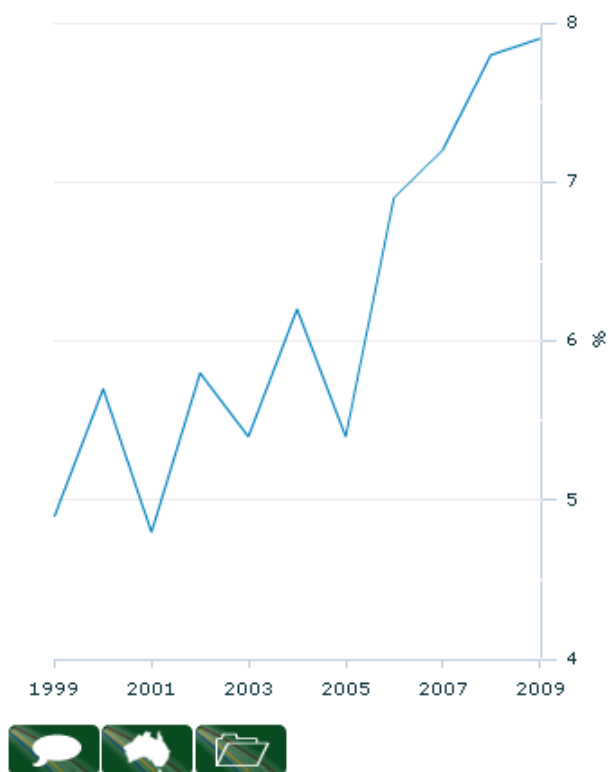
(a) Real income measure: reference year 2007-08. (b) Year ending 30 June.



Final consumption expenditure per capita



National net saving as a proportion of GDP



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National income

NATIONAL INCOME AND PROGRESS

National income is an indicator of Australians' capacity to purchase goods and services for consumption. It is a determinant of material living standards and is also important for other aspects of progress.

There are many ways to measure income and it is not possible for a single measure to account for everything of importance. However, the headline indicator - real net national disposable income per capita - has a variety of features that make it an informative indicator.

- It is a per capita measure. Total income could rise during periods of population growth, even though there may have been no improvement in Australians' average incomes.
- It is a real measure - it is adjusted to remove the effects of price change. Nominal or current price income could rise during periods of inflation, even though there may have been no increase in Australians' real capacity to buy goods and services.
- It takes account of income flows between Australia and overseas, and reflects changes in the relative prices of our exports and imports (our 'terms of trade'). These international influences on Australia's income can increase or decrease Australians' capacity to buy goods and services.
- It is a net measure - it takes account of the depreciation of machinery, buildings and other produced capital used in the production process. Hence, it reflects the income Australia can derive today while keeping intact the fixed capital needed to generate future income.

One drawback of real net national disposable income is that it is only available as a single national indicator and cannot be broken down for states or industries.

National income does not take account of some non-market activities such as unpaid household work that contribute to material living standards. Also, some analysts would prefer an income measure that is adjusted to take account of the true costs of natural assets used and negative externalities such as pollution emitted in the production process. These aspects are not built into the headline income measure.

Income may be spent on the consumption of goods and services or be set aside as savings for future consumption or investment. Supplementary progress indicators are therefore presented for final consumption expenditure per capita and national net savings as a proportion of GDP.

As GDP is a major influence on national income, further information is presented for GDP per capita. The industry, state and territory contributions to GDP are also presented in the form of industry gross value added and real gross state income per capita.

For a full list of definitions, please see the National Income glossary.

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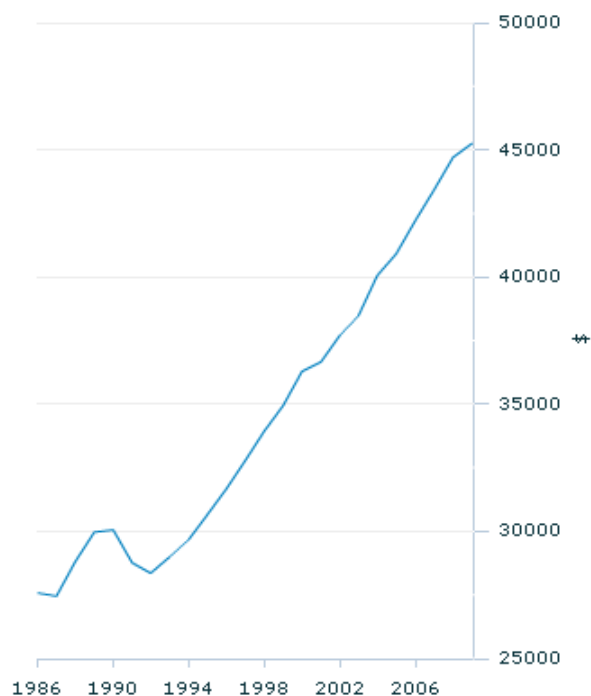
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National income

Real net national disposable income(a) per capita(b)



Footnote(s): (a) Real income measure: reference year 2007-08. (b) Year ending 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0)

NATIONAL DISPOSABLE INCOME

Real net national disposable income is a key measure of national economic wellbeing. It adjusts gross domestic product (GDP) for income flows between Australia and overseas, for changes in the relative prices of our exports and imports (the terms of trade) and for depreciation of fixed capital used in the production process, as these influences can increase or decrease the capacity of Australia and Australians to buy goods and services. These goods and services include food, clothing, housing, electricity, fuel, health care, transport, communications, recreation, social welfare and culture and education.

Australia experienced real per capita income growth throughout the past two decades (with the exception of the period of economic downturn in the early 1990s), averaging 2.1% growth per year in real net national disposable income per capita over the 20-year period to 2008-09. Between 1998-99 and 2008-09, growth averaged 2.6% per year, considerably higher than the average growth experienced over the previous decade (1.5%). The lower growth rate in the earlier period was partly the result of negative growth during the recession of 1990-1992.

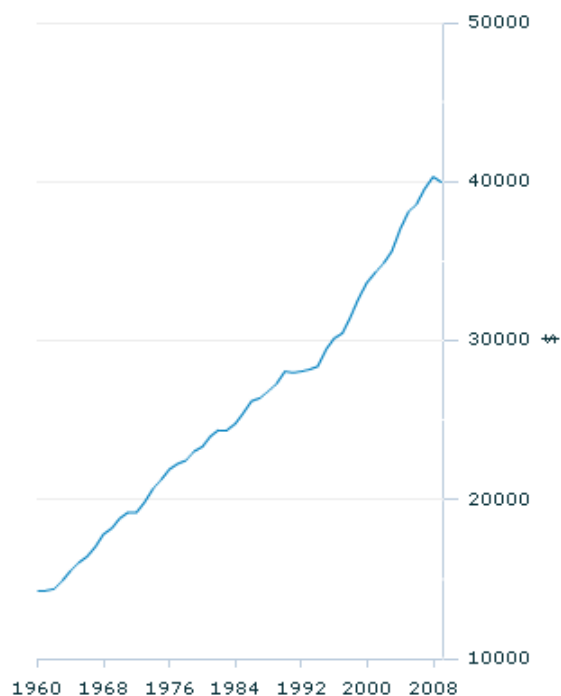
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National income

Final consumption expenditure(a) per capita(b)



Footnote(s): (a) Chain volume measure: reference year 2007-08. (b) Year ending 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0)

CONSUMPTION

If a nation experiences income growth, there may be an increase in either consumption or saving or both. Among the different measures of consumption, final consumption expenditure is the most directly relevant to an assessment of progress as it provides an aggregate measure of societal living standards.

Over the past decade, growth in final consumption expenditure per capita has been quite strong. Between 1998–99 and 2008–09, final consumption expenditure per capita rose by an average of 2.0% a year, which was higher than the average growth experienced over the previous decade (1.8%).

Both households and governments contribute to final consumption. There were some fluctuations in the relative contributions of the two sectors during the past decade, but in both 1998–99 and 2008–09, households accounted for about three-quarters of the total and government for about one-quarter. The government contribution has declined slightly in the last decade, as government final consumption expenditure grew more slowly (3.1% on average) than household final consumption expenditure (3.6%) between 1998-99 and 2008-09. Expenditure on health and education were the largest components of government consumption throughout this period. For more detail on household expenditure, see the Household economic wellbeing section.

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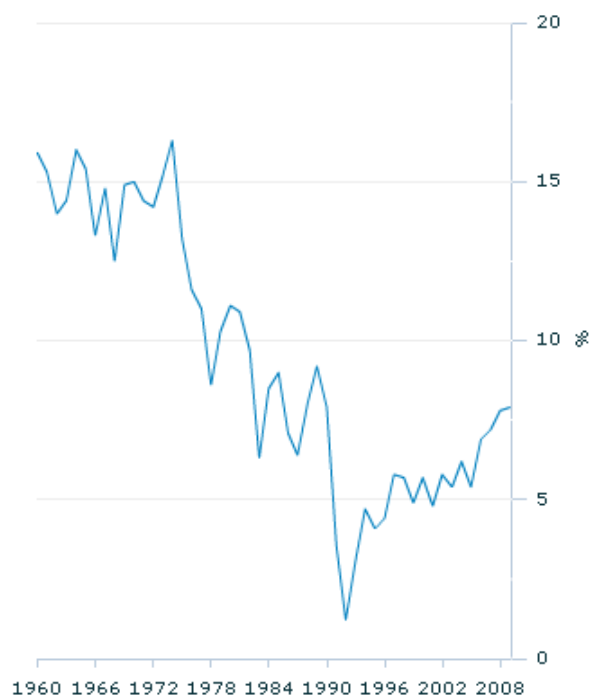
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National income

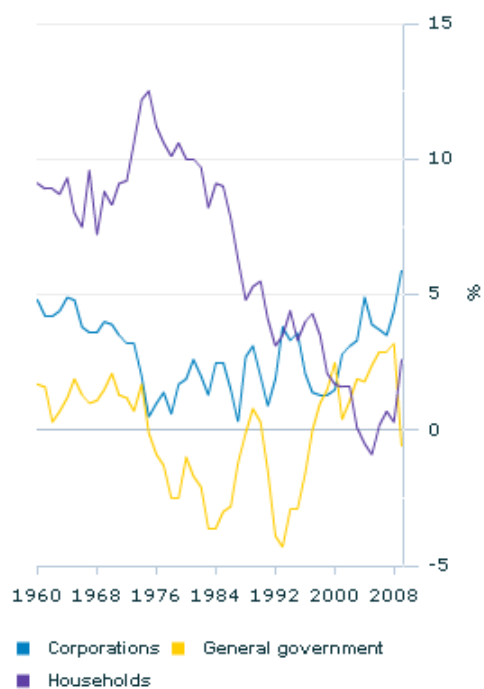
National net saving as a proportion of GDP(a)



Footnote(s): (a) Year ending 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0)

National net saving as a proportion of GDP - by sector(a)



Footnote(s): (a) Year ending 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0)

SAVINGS

Saving is one means of funding investment, which is the formation of fixed capital used in the production of goods and services (see the National wealth section for a more detailed discussion of the concept of investment). Income that is saved rather than spent on current consumption can be used to accumulate assets (wealth) that will generate future income and support future consumption.

Saving cannot be measured directly. It is calculated as a residual item by deducting final consumption expenditure from disposable income. Because it is estimated as the (relatively small) difference between two large national aggregates, saving is subject to any measurement error in, or revisions to, either aggregate.

Net saving represents the resources available for investment (capital formation) including replacement of fixed capital, but subtracting depreciation (consumption of fixed capital).

During the past decade, there was a 3.0 percentage point rise in the ratio of national net saving to GDP (from 4.9% to 7.9%). But the longer term trend has been downward; between 1960–61 and 1998–99 the ratio fell from 15.9% to 4.9%.

Sectors within a nation can have different saving behaviour, and national net saving can be dissected to show the trends in saving by the following sectors – households, general government and corporations.

Over the longer term (from the 1960s onward), the household sector has been the main contributor to national saving. However, since the mid 1970s, the net saving of the household sector relative to GDP has fallen.

The general government sector went from being a net saver during the 1960s to a net dissaver between the mid 1970s and mid 1990s. During the 1990s, government dissaving was progressively reduced and from 1996–97 onward the government sector was again a net saver, except during 2008–09. The corporate sector has been a net saver since the 1960s.

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National income

NATIONAL INCOME IN CONTEXT

During the past decade a number of factors have influenced the growth in national income per capita. These include growth in GDP, population growth, the rise in labour force participation, overall national productivity improvements and improvements in Australia's terms of trade.

Further information is included in the following pages to show how Australia's national income has changed over time. The issues explored include GDP, industry value added, state income, terms of trade and the proportion of the population in work.

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National income

Gross domestic product(a) per capita(b)

GDP

The most fundamental influence on income growth is growth in the volume of goods and services produced (Gross Domestic Product (GDP)), although like the headline indicator it does not take account of some non-market activities, such as unpaid household work, that contribute to material living standards.

As a measure of national progress, GDP is inferior to the headline indicator of real net national disposable income per capita as it does not take account of income flows between overseas and Australia, depreciation of fixed capital used in the production process, or changes in the terms of trade. However, GDP is discussed here because it is possible to dissect GDP by geography and by industry to investigate different trends within Australia.

Between 1998-99 and 2008-09, Australia's GDP grew by about 36% (averaging growth of 3.2% per year) (ABS 2009a). In the same decade the population grew by 16% (averaging 1.5% a year) (ABS 2010).

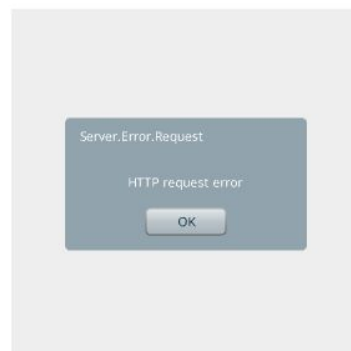
GDP per capita increased by an average 1.8% per year over the 40-year period from 1968-69 to 2008-09. It decreased during the economic downturns, for example those of the early 1980s, the early 1990s and 2008-09.

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Gross domestic product(a) per capita(b)



Footnote(s): (a) Chain volume measure: reference year 2007-08. (b) Year ending 30 June.
Source(s): [ABS Australian System of National Accounts, 2008-09 \(cat. no. 5204.0\)](#)

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National income

INDUSTRY VALUE ADDED

A strong influence on national income is the production of goods and services. Production can increase if the factors of production – capital, labour and non-produced assets (such as land) – are built up or used more efficiently.

During the past decade, different industries have exhibited substantially different rates of value added growth. Broadly, many service industries showed stronger growth than goods-producing industries.

Industry gross value added (IGVA) is the total value of goods and services produced by an industry, after deducting the cost of goods and services used in the process of production. Among the industries showing strongest growth in IGVA (between 1998–99 and 2008–09) were Construction (averaging over 4.7% a year), Administrative and support services (4.5%), and Health care and social assistance (4.4%).

Industry gross value added(a)(b), average annual growth rates - 1998-99 to 2008-09

Industry	%
Agriculture, forestry and fishing	2.3
Mining	3.0
Manufacturing	0.8
Electricity, gas, water and waste services	1.5
Construction	4.7
Wholesale trade	3.0
Retail trade	4.2
Accommodation and food services	2.4
Transport, postal and warehousing	3.9
Information media and telecommunications	3.7
Financial and insurance services	4.3
Rental, hiring and real estate services	2.1
Professional, scientific and technical services	4.3
Administrative and support services	4.5
Public administration and safety	2.6
Education and training	1.7
Health care and social assistance	4.4
Arts and recreation services	4.1
Other services	2.0
Ownership of dwellings	3.7
Gross Domestic Product	3.2

(a) The sum of IGVA across industries differs from GDP to the extent of taxes less subsidies on products.

(b) Chain volume measure: reference year 2007-08.

Source: ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0)

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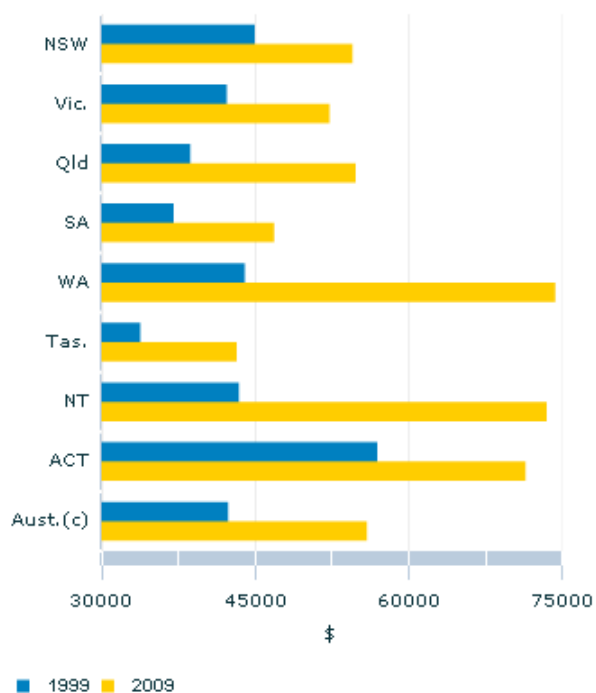
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National income

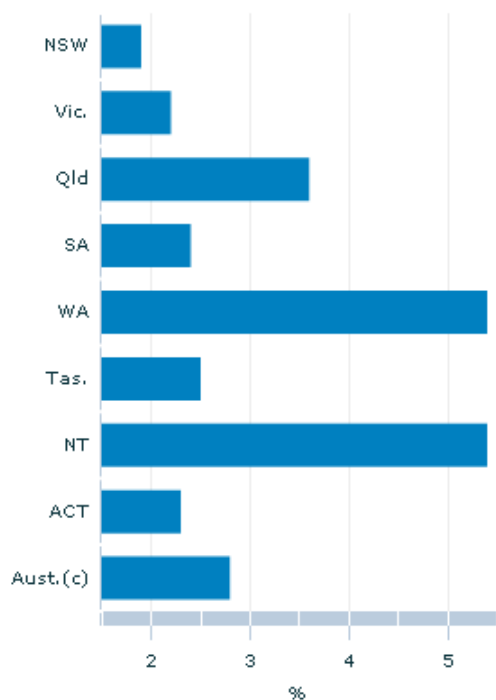
Real gross state income(a) per capita(b)



Footnote(s): (a) Reference year 2007-08. (b) Year ending 30 June. (c) Real gross domestic income per capita.

Source(s): ABS Australian National Accounts: State Accounts 2008-09 (cat. no. 5220.0)

Real gross state income(a) per capita - average annual growth rate - 1999 to 2009(b)



Footnote(s): (a) Reference year 2007-08. (b) Year ending 30 June. (c) Real gross domestic income per capita.

Source(s): ABS Australian National Accounts: State Accounts 2008-09 (cat. no. 5220.0)

STATE INCOME

The headline indicator, real net disposable income per capita, is available only at the national level. To understand some of the trends underlying the national indicator, one can look at state contributions to GDP.

Real gross state income per capita grew in every state and territory between 1998–99 and 2008–09. Growth was strongest in Western Australia and the Northern Territory (both averaging 5.4% per year), and weakest in New South Wales (averaging 1.9% per year). During the same period, Australian real gross domestic income per capita grew by 2.8% per year. Gross domestic income is calculated by adjusting GDP for changes in the terms of trade.

There were wide and persistent disparities in real gross state income per capita levels among the states and territories between 1998–99 and 2008–09. Western Australia and the Northern Territory had the highest levels of real gross state income per capita in 2008-09, relegating the ACT, which had the highest real gross state income per capita in 1998-99, to third. In 2008–09, real gross state income per capita levels ranged between \$43,000 and \$74,000 (in 2007–08 prices), with Tasmania the lowest and Western Australia the highest (ABS 2009b).

State disposable incomes (if we could measure them) might not be so diverse because there are significant transfer payments and other financial flows between states that can moderate the differences. Examples include Commonwealth government taxes and expenditures, and incomes transferred between states or territories and the rest of the world.

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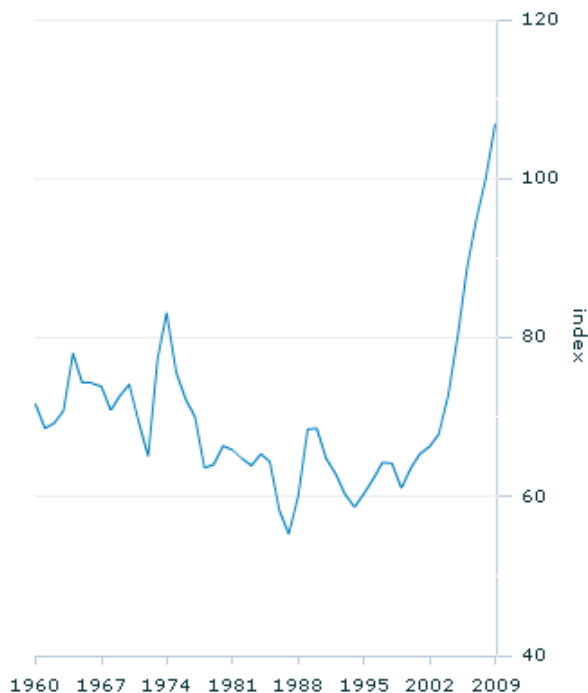
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National income

Australia's terms of trade(a)(b)



Footnote(s): (a) Index: reference year is 2007–08 = 100.0. (b) Year ending 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0)

TERMS OF TRADE

Domestic economic events are not the only influence on national income. In particular, changes in the relative prices of Australia's exports and imports (the terms of trade) affect real national income.

Imports give the residents of a country access to goods and services that cannot be produced (or cannot be produced as cheaply) in the domestic economy. Exports are one important way of funding purchases of imports, and of maintaining levels of domestic production, income and employment. Thus, changes in the terms of trade can affect the volume of goods and services that must be exported to fund a given volume of imports.

The goods and services that make up a country's exports are typically quite different from those that make up its imports – for example, agricultural and mining products account for a fairly large proportion of Australia's exports, whereas manufactured goods and some services account for a large proportion of our imports.

During much of the 20th century, there was a general trend toward falling prices of primary commodities (especially agricultural products) relative to other traded goods and services. This reflected both shifts in the composition of worldwide demand and supply, and the effect of improvements in productivity. Around that long-term trend, there have also been oscillations (each lasting several years) that have reflected short-to-medium run changes in demand and supply conditions.

Between 1998-99 and 2008-09, Australia's terms of trade have undergone an unprecedented rise of 75%, reflecting changes in both the prices and the composition of traded goods and services. Export prices

grew by 86% while import prices grew by just 9%. The rise in export prices was driven by increases in coal and metal ores while falls in prices of many manufactured goods helped keep prices of imports down (ABS 2009a).

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Population in work(a)



Footnote(s): (a) Total employed persons as a proportion of the total Australian resident population at 30 June.

Source(s): ABS Labour Force, Australia (cat. no. 6202.0); ABS Australian Demographic Statistics (cat. no. 3101.0); ABS Australian Historical Population Statistics (cat. no. 3105.0.65.001)

POPULATION IN WORK

Consideration of the proportion of the population that is employed adds to the information provided by the income and output indicators discussed elsewhere in this section.

The proportion of the population employed provides a broad indicator of the degree of economic dependency in Australia – the relative sizes of the total population and of that part of the population engaged in income-generating economic activity. Economic dependency may increase owing to, say, a rise in the number of unemployed or the number of retired people (especially those receiving an aged pension).

Between June 1999 and June 2008, the proportion of the Australian population that was employed rose from 46% to 50%, before falling slightly to 49% in 2009. For more information on employment and related measures, see the Work section.

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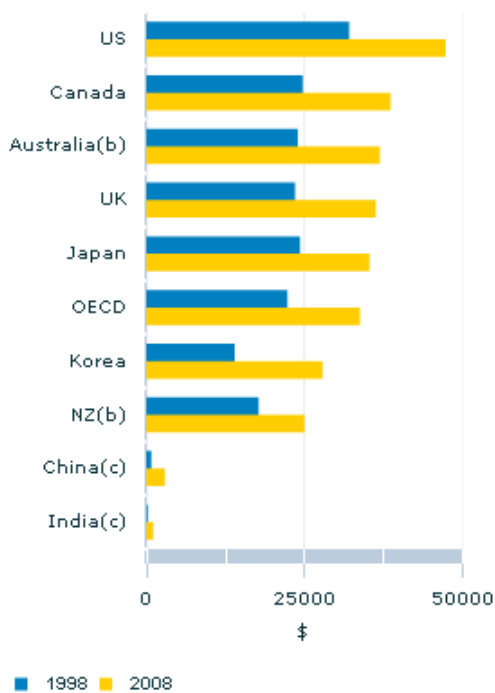
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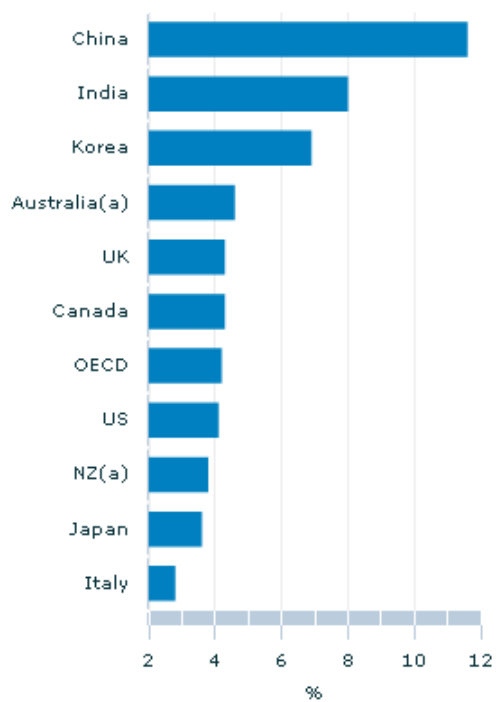
Gross national income(a) per capita - selected OECD countries



Footnote(s): (a) US dollars, current prices and adjusted for purchasing power. (b) Data refer to fiscal year. (c) Data sourced from the World Bank, using the Atlas method and current US\$.

Source(s): OECD Factbook 2010; The World Bank

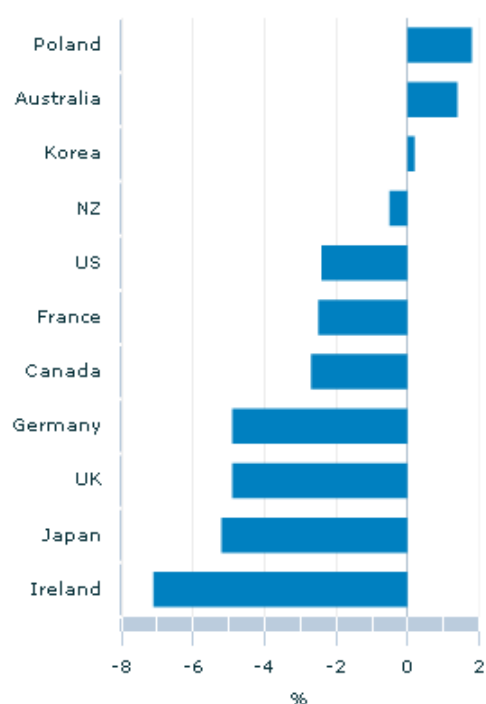
Average annual GDP per capita growth - selected OECD countries - 1998 to 2008



Footnote(s): (a) Data refer to fiscal year.

Source(s): OECD Factbook 2010

Real GDP growth - selected OECD countries - 2008 to 2009



Source(s): OECD Economic Outlook no. 87

INTERNATIONAL COMPARISONS

Gross National Income

There is no data source available that provides directly comparable international data for the headline

indicator for national income: real net disposable income per capita. An indicator available for OECD countries that captures a similar concept is Gross National Income (GNI). GNI reflects a country's capacity to purchase goods and services, which influences material living standards and is important for other aspects of progress. It is important to point out that GNI is based on current prices, not real terms (i.e. adjusted to remove the effects of price change).

In 2008, Australia's GNI per capita was US\$36,900, up 4.4% per year from 1998 (US\$23,900). The UK (US\$36,300) and Japan (US\$35,300) had a very similar level of GNI per capita to Australia.

In 2008, the US had one of the highest levels of GNI per capita (US\$47,300). Non-member OECD countries China and India had very low GNI per capita (US\$2,900 and US\$1,000 respectively), although they experienced high levels of growth over the ten years to 2008 (14.0% and 15.8% per year respectively). On average, OECD countries experienced an average rise of 4.2% per year in GNI per capita over the ten years to 2008.

Average annual GDP per capita growth

To examine changes over time in national income, growth in GDP per capita is a useful indicator.

During the period 1998–2008, OECD countries experienced an average per capita growth in GDP of 4.2%. Of those included in OECD statistics, non-member countries China and India reported the strongest growth with an average annual growth of 11.6% and 8.0% respectively. To put this into context, China and India started from the lowest base in 1998 and were still at very low levels of GDP per capita in 2008. The lowest annual average growth in GDP per capita between 1998 and 2008 occurred in Italy (2.8%). Annual average growth in GDP per capita in Australia during this period was 4.6%, similar to the United Kingdom (4.3%).

GDP and the global financial crisis

For most developed countries, the recent global financial crisis (GFC) resulted in the steepest decline in economic activity since the great depression (OECD 2010b). In the year to 2009, GDP fell sharply across most OECD economies. Among the largest declines was Ireland, falling by 7.1%. Some of the largest economies also had deep downturns, with Japan declining by 5.2%, Germany and the United Kingdom (each down by 4.9%), and the United States declining by 2.4%.

Australia, along with Poland and Korea, were the only countries to escape negative real GDP growth in the year to 2009 with respective GDP growth of 1.4%, 1.8% and 0.2%. However, a number of non-member OECD countries managed relatively strong growth throughout the GFC. Among the significant non-member OECD countries in 2009, China and India had the strongest performing economies with annual growth of 8.7% and 5.7% (IMF 2010).

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LINKS TO OTHER DIMENSIONS OF PROGRESS

Australia's national income provides the material basis for many other dimensions of progress. For example, improvements in health and education may rely on expenditures funded out of income - such as the building and running of hospitals and schools. Conversely, a healthier, more educated population can better engage in the economic activity that generates income.

While aggregate national income growth is a key element of progress, the distribution of household income is also considered by many to be important in determining progress. Discussion around household income can be found in the Household economic wellbeing section.

Income-generating activity may also go hand in hand with environmental depletion or degradation, but income can also be invested in its restoration. Also, emissions of pollutants or greenhouse gases impact on health and quality of life. For more information on air quality, see the Atmosphere section.

Some of the growth in income may be channelled to the accumulation of national wealth that will generate future income, or it may be spent to improve the welfare of economically disadvantaged Australians. For more information see the National wealth section.

Income is strongly linked to work and improvements in productivity, and changes in income may reflect technological, demographic and labour market trends. Income growth may result partly from a trade-off for longer working hours and reduced leisure. For more information see the Productivity and Work sections.

See also the sections linked below.

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NATIONAL INCOME GLOSSARY

Chain price indexes

Annually-reweighted chain Laspeyres price indexes referenced to the same year as the chain volume measures. They can be thought of as a series of indexes measuring price change from a base year to quarters in the following year using current price values in the base year as weights, linked together to form a continuous time series. In other words, chain price indexes are constructed in a similar fashion to the chain volume indexes. Quarterly chain price indexes are benchmarked to annual chain price indexes in the same way as their chain volume counterparts. Unlike implicit price deflators, chain price indexes measure only the impact of price change.

Chain volume measures

Annually-reweighted chain Laspeyres volume indexes referenced to the current price values in a chosen reference year (i.e. the year when the quarterly chain volume measures sum to the current price annual values). Chain Laspeyres volume measures are compiled by linking together (compounding) movements in volumes, calculated using the average prices of the previous financial year, and applying the compounded movements to the current price estimates of the reference year. Quarterly chain volume estimates are benchmarked to annual chain volume estimates, so that the quarterly estimates for a financial year sum to the corresponding annual estimate.

Generally, chain volume measures are not additive. In other words, component chain volume measures do not sum to a total in the way original current price components do. In order to minimise the impact of this property, the ABS uses the latest base year as the reference year. By adopting this approach, additivity exists for the quarters following the reference year and non-additivity is relatively small for the quarters in the reference year and the quarters immediately preceding it.

Consumption of fixed capital

Also known as depreciation, it is the reduction in the value of fixed assets used in production during the accounting period resulting from physical deterioration, normal obsolescence or normal accidental damage. Unforeseen obsolescence, major catastrophes and the depletion of natural resources are not taken into account.

Current prices

Estimates are valued at the prices of the period to which the observation relates. For example, estimates for 2007-08 are valued using 2007-08 prices. This contrasts to chain volume measures where the prices used in valuation refer to the prices of a previous period.

Depreciation

The accounting process of systematically allocating the cost less estimated residual value of an asset over its expected useful life. Depreciation as recorded in government financial records may deviate considerably from consumption of fixed capital as depreciation is normally calculated using the original costs of fixed assets. See 'Consumption of fixed capital'.

Exports of goods and services

The value of goods exported and amounts receivable from non-residents for the provision of services by residents.

Employed persons

Employed persons include all persons aged 15 years and over who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind in a job or business, or on a farm (comprising employees, employers and own account workers); or worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or
- were employees who had a job but were not at work and were:
 - away from work for less than four weeks up to the end of the reference week; or
 - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week; or
 - away from work as a standard work or shift arrangement; or
 - on strike or locked out; or
 - on workers' compensation and expected to return to their job; or
- were employers or own account workers, who had a job, business or farm, but were not at work.

Final consumption expenditure

Net expenditure on goods and services by persons, expenditure of a current nature by private non-profit institutions serving households and net expenditure on goods and services (which does not result in the creation of fixed assets or inventories or in the acquisition of land and existing buildings or second-hand assets) by public authorities other than those classified as public corporations. See 'Final consumption expenditure - general government' and 'Final consumption expenditure - households'.

Final consumption expenditure - general government

Net expenditure on goods and services by public authorities, other than those classified as public corporations, which does not result in the creation of fixed assets or inventories or in the acquisition of land and existing buildings or second-hand assets. It comprises expenditure on compensation of employees (other than those charged to capital works, etc.), goods and services (other than fixed assets and inventories) and consumption of fixed capital. Expenditure on repair and maintenance of roads is included. Fees, etc., charged by general government bodies for goods sold and services rendered are offset against purchases. Net expenditure overseas by general government bodies and purchases from public corporations are included. Expenditure on defence assets that are used in a fashion similar to civilian assets is classified as gross fixed capital formation; expenditure on weapons of destruction and weapon delivery systems is classified as final consumption expenditure.

Final consumption expenditure - households

Net expenditure on goods and services by persons and expenditure of a current nature by private non-profit institutions serving households. This item excludes expenditures by unincorporated businesses and expenditures on assets by non-profit institutions (included in gross fixed capital formation). Also excluded are maintenance of dwellings (treated as intermediate expenses of private enterprises), but personal expenditure on motor vehicles and other durable goods and the imputed rent of owner-occupied dwellings are included. The value of 'backyard' production (including food produced and consumed on farms) is included in household final consumption expenditure and the payment of wages and salaries in kind (e.g. food and lodging supplied free to employees) is counted in both household income and household final consumption expenditure.

Final consumption expenditure per capita

The ratio of final consumption expenditure to an estimate of the resident Australian population. Population estimates use data published in the quarterly publication ABS Australian Demographic Statistics (cat. no. 3101.0).

Fixed assets

Produced assets that are used repeatedly, or continuously, in processes of production for more than one year. Fixed assets not only include structures, machinery and equipment and intellectual property products but also cultivated assets such as trees and animals that are used repeatedly or continuously to produce other products such as fruit and dairy products.

General government sector

General government consists of all government units and non-market NPIs that are controlled and mainly financed by government. It mainly comprises Commonwealth, State and local government departments, offices and other bodies that are primarily engaged in production of goods and services outside the normal market mechanism. Statistics for this broad sector are broken down into two levels of government (LOG): National government; and State and local government.

All units that have a national role or function are classified to the National government sector. The fact that a unit is controlled by the Commonwealth Government is prima facie (but not necessarily conclusive) evidence that the unit has a national role or function. The only multi-jurisdictional units currently classified to the National LOG are the public universities which are mainly financed and partly controlled by the Commonwealth Government but are subject to a degree of control by the establishing State or Territory Government. All units that have a State or Territory, or a local, role or function are classified to the State and local government sector.

Gross domestic product (GDP)

The total market value of goods and services produced in Australia within a given period after deducting the cost of goods and services used up in the process of production but before deducting allowances for the consumption of fixed capital. Thus gross domestic product, as here defined, is 'at market prices'. It is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services.

GDP per capita

The ratio of the chain volume estimate of GDP to the estimated resident population (ERP) of Australia. Population estimates use data published in the quarterly publication ABS Australian Demographic Statistics (cat. no. 3101.0) and ABS projections.

Gross national expenditure (GNE)

The total expenditure within a given period by Australian residents on final goods and services (i.e. excluding goods and services used up during the period in the process of production). It is equivalent to gross domestic product plus imports of goods and services less exports of goods and services.

See 'Real gross domestic income' and 'Gross domestic product (GDP)'.

Gross national income (GNI)

This measures the total domestic and foreign value added claimed by residents. GNI comprises Gross Domestic Product (GDP) plus net receipts of primary income from non-resident sources. It is the aggregate value of gross primary incomes for all institutional sectors, including net primary income receivable from non-residents. Gross National Income was formerly called gross national product (GNP).

Gross national income (GNI) per capita

The ratio of gross national income (GNI) to the estimated resident population (ERP) of Australia. Population estimates use data published in the quarterly publication Australian Demographic Statistics (cat. no. 3101.0).

Gross value added (GVA)

The value of output at basic prices minus the value of intermediate consumption at purchasers' prices. The term is used to describe gross product by industry and by sector. Basic prices valuation of output removes the distortion caused by variations in the incidence of commodity taxes and subsidies across the output of individual industries.

See 'Industry gross value added (IGVA)'.

Household sector (National Accounts basis)

Includes all non-financial unincorporated enterprises that are owned and controlled by households and are

not included in the private non-financial corporations sector. Most business partnerships and sole proprietorships are included because their owners combine their business and personal affairs and do not keep separate accounts for their business operations and therefore do not qualify as quasi-corporations. Although private non-market non-profit institution serving households, such as clubs and charities, are included in a separate sector in the Standard Economic Sector Classification of Australia (SESCA) (ABS cat. no. 1218.0), in this publication such non-profit institutions are included with the households sector because separate information about their financial operations is not available.

A household is a small group of persons who share the same living accommodation, who pool some, or all, of their income and wealth and who consume certain types of goods and services collectively, mainly housing and food. Households include group households of unrelated persons, same-sex couple households, single-parent households as well as one-person households. A household usually resides in a private dwelling (including caravans etc. in caravan parks). Persons usually resident in non-private dwellings, such as hotels, motels, boarding houses, jails and hospitals, are not included in household estimates. This definition of a household is consistent with the definition used in the Census. The number of households can be either based on count or estimated resident population.

Industry gross value added (IGVA)

The total value of goods and services produced by an industry, after deducting the cost of goods and services used up in the process of production. The sum of IGVA across industries differs from GDP to the extent of taxes less subsidies on products.

See 'Gross value added (GVA)' and 'Gross domestic product (GDP)'.

Imports of goods and services

The value of goods imported and amounts payable to non-residents for the provision of services to residents.

Intermediate consumption

Consists of the value of the goods and services used as inputs by a process of production, excluding compensation of employees and the consumption of fixed capital.

National net saving

Calculated as the sum of the net saving of each of the resident sectors – households and unincorporated enterprises, non-financial corporations, financial corporations and general government. Also referred to as net saving.

Net saving

See 'National net saving'.

Net saving - corporations

This is equal to the gross income receivable by corporations less income payable and consumption of fixed capital. Income receivable by corporations includes gross operating surplus, property income and current transfers receivable. Income payable includes property income and current transfers (including income taxes) payable.

Net saving - general government

The surplus of general government gross income over current use of income. Current use of income includes final consumption expenditure and current transfers (interest and other property income payable, social assistance benefits payments to residents, transfers to non-profit institutions, subsidies, etc.).

Net saving - households

Is equal to gross household disposable income less household final consumption expenditure and

consumption of fixed capital. Household saving is estimated as the balancing item in the households income account. It includes saving through life insurance and superannuation funds (including net earnings on these funds), increased equity in unfunded superannuation schemes and the increase in farm assets with marketing boards.

OECD

Organisation for Economic Co-operation and Development.

Population in work

The ratio of the number of employed persons to an estimate of the resident Australian population. Population estimates use data published in the quarterly publication ABS Australian Demographic Statistics (cat. no. 3101.0).

Purchasing power parity (PPP)

For international comparison purposes, income and GDP estimates are adjusted for purchasing power parity i.e. the time it takes a person on an average wage to purchase an average basket of goods and services. For example, incomes might be higher in a given country, but prices might also be higher.

Real

It is possible to deflate measures of income and wealth by a price index in order to measure purchasing power. By comparing the deflated value of the income with the actual value of the income, it is possible to determine by how much the real purchasing power of the income or wealth has increased or decreased. Aggregates deflated in this way is generally described as "real". Real income or wealth is measured with reference to the price level in some selected reference year. Thus real values cannot exist in isolation, rather they vary depending upon the choice of reference year.

Real gross domestic income

Calculated by:

- taking the volume measure of gross national expenditure (GNE)
- adding exports of goods and services at current prices deflated by the implicit price deflator for imports of goods and services
- deducting the volume measure of imports of goods and services
- adding the current price statistical discrepancy for GDP(E) deflated by the implicit price deflator for GDP.

In the derivation of the aggregate all of the adjustments are made using the chain volume aggregation method used to derive all of the ABS chain volume estimates.

See 'Gross national expenditure (GNE)', 'Real net national disposable income (RNNDI)' and 'Real gross state income (RGSi)'.

Real gross national income

Calculated by adjusting real gross domestic income for the real impact of primary income flows (property income and labour income) to and from overseas.

Real gross state income (RGSi)

This is the total value of goods and services produced in a state or territory, after deducting the cost of goods and services used up in the process of production and taking into account changes in state terms of trade. The comparable Australian estimate is real gross domestic income.

See 'Real gross domestic income'.

Real gross state income (RGSi) per capita

The ratio of RGSi to an estimate of the resident Australian population. Population estimates use data

published in the quarterly publication ABS Australian Demographic Statistics (cat. no. 3101.0).

Real net national disposable income (RNNDI)

Calculated by:

- taking real gross domestic income
- deducting real incomes payable to the rest of the world
- adding real incomes receivable from the rest of the world
- deducting the volume measure of consumption of fixed capital.

Real incomes payable and receivable are calculated by dividing the nominal income flows by the implicit price deflator for gross national expenditure. In the derivation of the aggregate, all of the adjustments are made using the chain volume aggregation method used to derive all of the ABS chain volume estimates.

See 'Real gross domestic income'.

Real net national disposable income (RNNDI) per capita

The ratio of RNNDI to the estimated resident population (ERP) of Australia. Population estimates use data published in the quarterly publication ABS Australian Demographic Statistics (cat. no. 3101.0). See 'Real net national disposable income (RNNDI)'.

Terms of trade

Calculated by dividing the export implicit price deflator by the import implicit price deflator and multiplying by 100.

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National income

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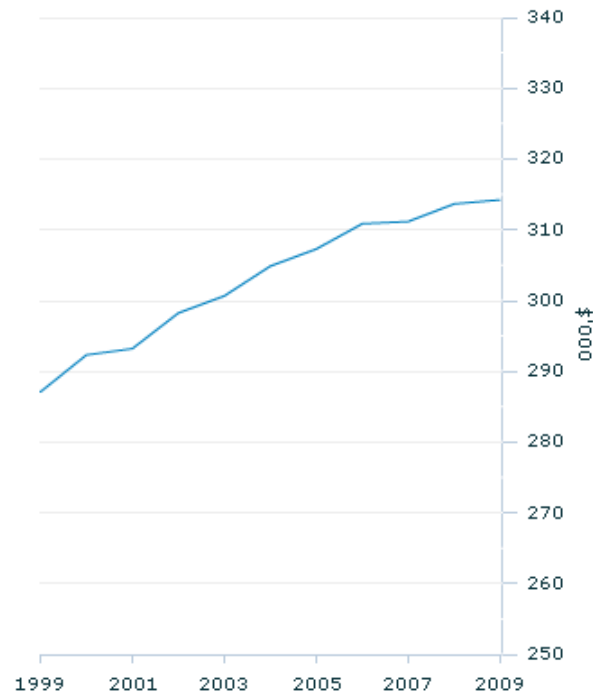
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National wealth



Real national net worth(a) per capita(b)

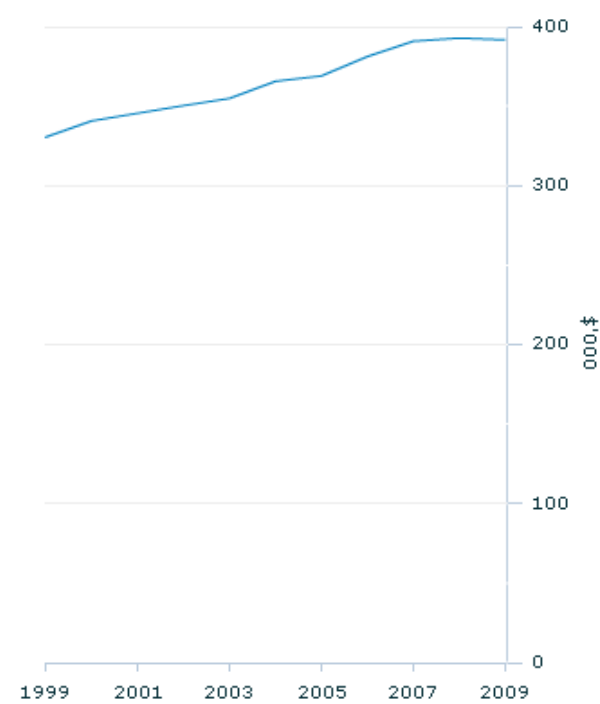
Between June 1999 and June 2009, Australia's real national net worth per capita increased from \$287,100 to \$314,200, equivalent to an average annual growth rate of 0.9%.

In recent years the growth in Australia's wealth has slowed compared to earlier in the decade. Australia's real national net worth per capita grew by an average annual rate of 0.4% in the three years to June 2009, while the growth rate for the previous seven years to June 2006 was an average of 1.1% per year.

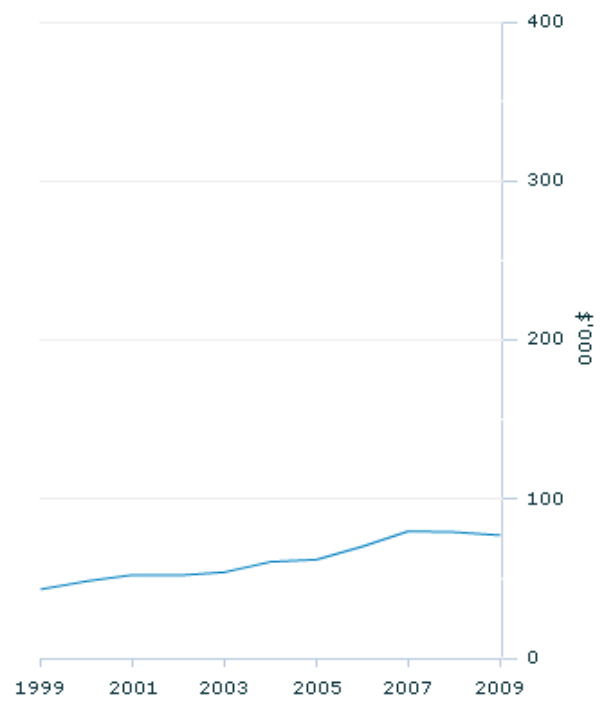
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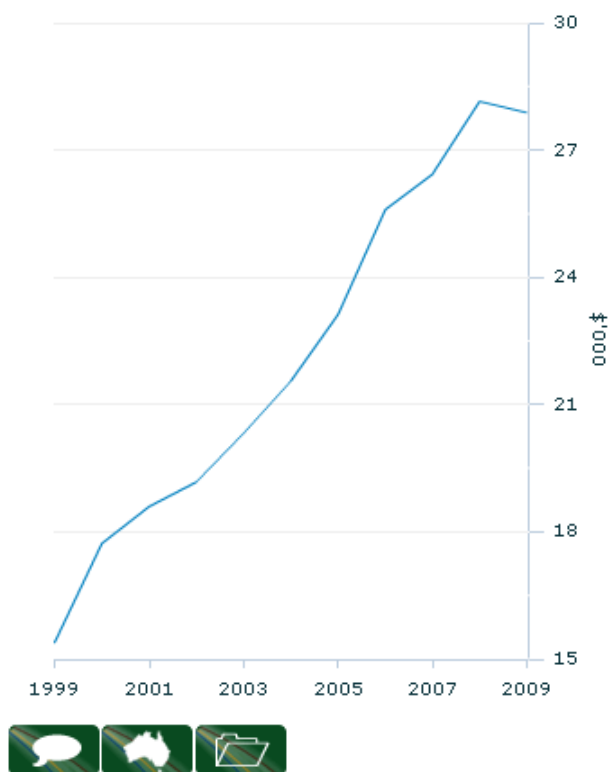
Real national assets per capita



Real national liabilities per capita



Real net foreign debt per capita



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NATIONAL WEALTH AND PROGRESS

A nation's wealth, along with the skills of the workforce, has a major effect on its capacity to generate income. Produced assets (such as machinery and equipment) are used in income-generating economic activity. Some natural assets (such as minerals and native timber) generate income at the time of their extraction or harvest. Holdings of financial assets with the rest of the world (such as foreign shares, deposits and loans) return income flows to Australia. Other assets, such as owner-occupied dwellings, provide consumption services direct to their owners.

Income that is saved rather than spent on current consumption allows the accumulation of wealth that may generate income and support higher levels of consumption in the future.

While it is not possible for a single measure to account for everything of importance, the headline indicator - real national net worth per capita - has a number of features that make it an informative indicator of whether life in Australia is getting better.

- It is a net measure – it shows the amount by which Australia's assets exceed its liabilities to the rest of the world.
- It is a per capita measure – total wealth could rise if the population grew, even though there may have been no improvement in Australians' average wealth.
- It is a real measure – it is adjusted to remove the effects of price change.

However, national wealth measures do not take into account everything that might be regarded as valuable. For example, real national net worth per capita excludes the following:

- consumer durables (such as refrigerators and motor vehicles)
- native forests and other natural assets not used for economic production
- valuables held as stores of wealth, such as precious metals and stones, antiques and works of art
- human capital (e.g. knowledge and skills) and social capital (e.g. social networks and trust).

Although these items are not built into the headline wealth measure, other sections (such as those for Education and training, and the Land and Biodiversity dimensions of progress) provide information about them. In addition, the Productivity section provides information on growth in the nation's productivity.

Other measures that provide information about whether Australia's national wealth is increasing include real national assets and liabilities per capita and real net foreign debt. These are included in the discussion in this section.

Further information is also provided about the types of assets that Australia holds and how this has changed over time e.g. shares, machinery and equipment or computer software.

Throughout this section the terms net worth and wealth are used interchangeably.

For a full list of definitions, please see the National wealth glossary.

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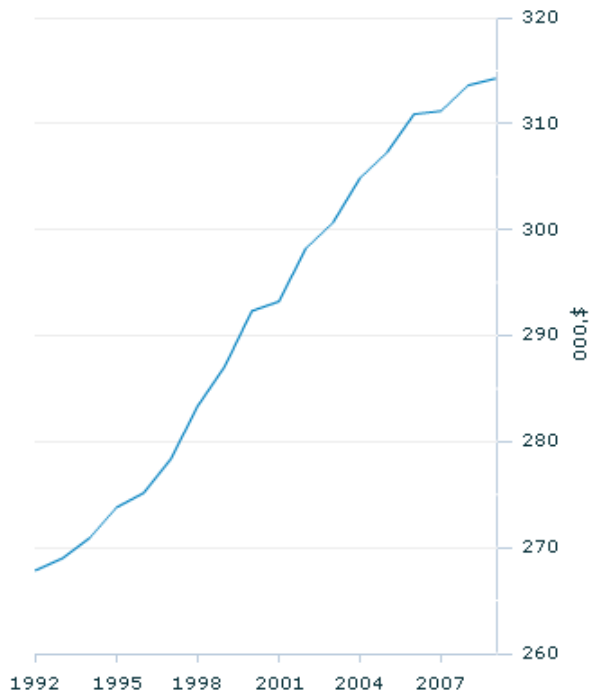
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National wealth

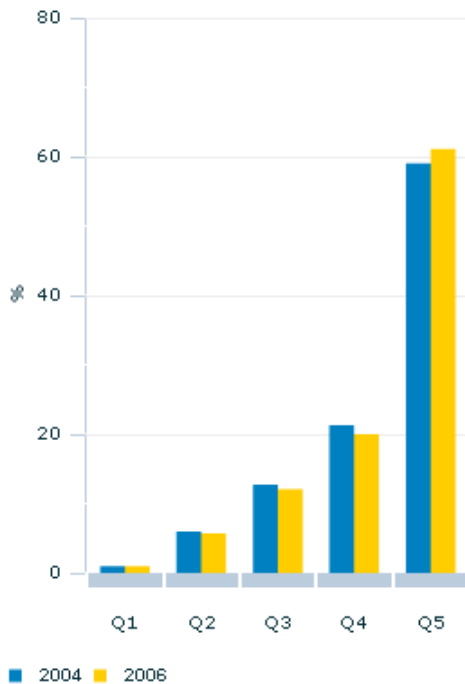
Real national net worth(a) per capita(b)



Footnote(s): (a) Reference year 2007-08. (b) At 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0); ABS Australian Demographic Statistics (cat. no. 3101.0)

Share of total household net worth by income quintile(a)(b)



Footnote(s): (a) As at 30 June. (b) Q1 is the lowest income quintile and Q5 is the highest income quintile.

Source(s): ABS Household Wealth and Wealth Distribution, 2005-06 (cat. no. 6554.0)

NET WORTH

The growth in a nation's wealth is the outcome of a wide variety of influences. Broadly, changes in real wealth reflect both accumulations of past saving or dissaving and changes in the relative prices of assets and liabilities.

In June 2009, Australia's real national net worth was \$6,899b, and real national net worth per capita was \$314,200 (in 2007-08 prices). Between June 1999 and June 2009, Australia's real national net worth per capita rose by an average annual rate of 0.9%.

Growth slowed in recent years, affected by the global financial crisis. Australia's real national net worth per capita grew by an average of 0.4% per year in the three years to June 2009, around a third of the average growth rate for the rest of the decade.

Across broad sectors of the economy, the household sector had the highest net worth per capita in current-price terms with \$232,300 in June 2009, up an average 6.4% per year from June 1999 (\$124,400). Household sector net worth per capita accounted for about 74% of total net worth per capita in June 2009, down from 81% in June 1999. The remainder was mostly accounted for by general government (21% in June 2009) and non-financial corporations (10%). The contribution of financial corporations to national net worth has been negative since June 1998.

The economic cycle has a significant impact on the investment activity of a nation, which in turn can affect its population's ability to accumulate wealth. The Australian economy's strong growth following the recession in the early part of the 1990s underpinned the increase in investment (gross fixed capital formation) in the 1990s and early 2000s.

Changes in technology, especially in information technology, have also influenced the increase in investment activity. For example, the computerisation of many manufacturing systems and processes may have driven increases in investment in machinery and equipment hence contributing to the wealth of the nation.

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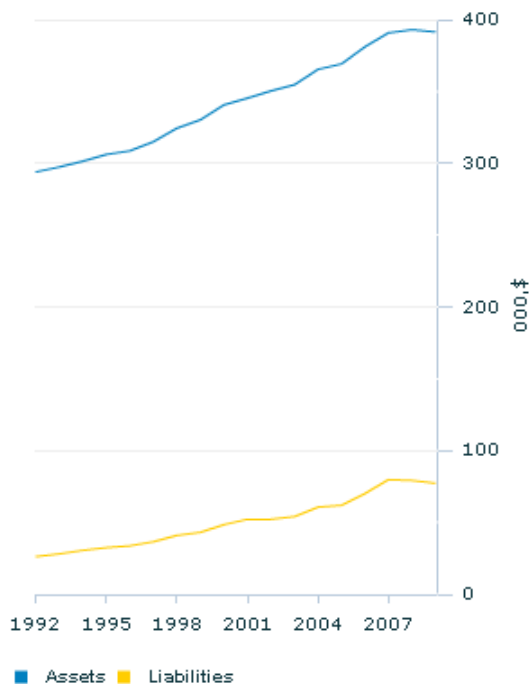
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National wealth

Real national assets and liabilities(a) per capita(b)



Footnote(s): (a) Reference year 2007-08. (b) At 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0); ABS Australian Demographic Statistics (cat. no. 3101.0)

ASSETS AND LIABILITIES

Changes in Australia's net worth are the net result of changes in both assets and liabilities. Between June 1999 and June 2009, Australia's real assets per capita grew by 1.7% per year, and real per capita liabilities to the rest of the world grew by 6.0% per year. While Australia's liabilities are growing faster than assets, assets remain much greater than liabilities - in June 2009 the value of assets was around five times that of liabilities.

Estimates of assets and liabilities are shown in the national balance sheet which forms part of the Australian System of National Accounts. For an asset to appear in the balance sheet, some person or institution must be able to enforce ownership rights over it; also, it must be possible for the owner of the asset to derive economic benefit from holding or using it. Assets include:

- Dwellings, other buildings, machinery, inventories, plantation forests and so on ('produced non-financial assets').
- Land, native forests and minerals that are used for economic purposes ('non-produced non-financial assets').
- Currency, shares, loans and other securities ('financial assets').

Australia's liabilities to the rest of the world include borrowings from overseas and foreign holdings of Australian currency, shares and other securities.

In principle, all assets and liabilities appear in the balance sheet at market value; in practice, owing to data

limitations, a variety of approximations and estimating procedures must be used.

Between June 1999 and June 2009, real produced assets per capita grew by 2.0% per year, while real non-produced assets per capita fell slightly (0.2% a year). Real financial assets per capita with the rest of the world grew by 7.7% per year, while real liabilities per capita to the rest of the world grew by 6.0%.

Real assets and liabilities(a) per capita

	30 June 1999	30 June 2009	Average annual growth rate
	\$	\$	%
Produced assets	148 971	181 478	2.0
Non-produced assets	166 349	163 719	-0.2
<i>Total non-financial assets</i>	<i>312 398</i>	<i>345 198</i>	<i>1.0</i>
Financial assets with rest of the world	22 054	46 472	7.7
<i>Total assets</i>	<i>330 490</i>	<i>391 669</i>	<i>1.7</i>
Total liabilities to rest of the world	43 369	77 421	6.0
Net worth	287 120	314 248	0.9

(a) Reference year 2007-08. Components may not sum to totals.

Sources: ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0); ABS Australian Demographic Statistics (cat. no. 3101.0).

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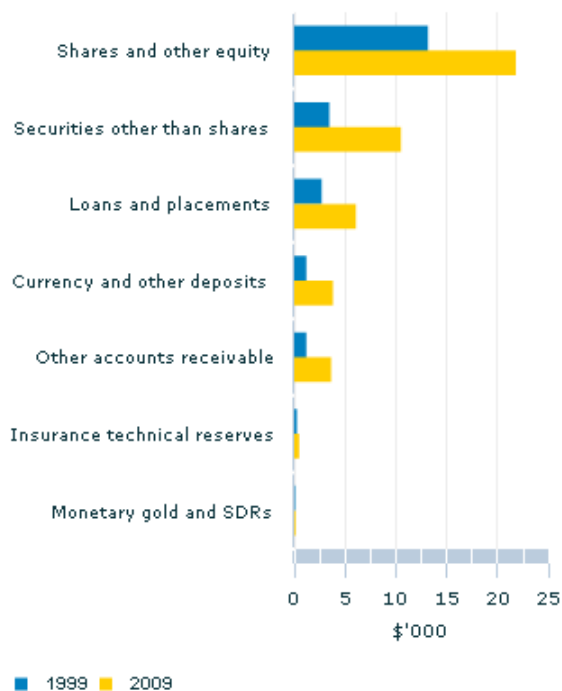
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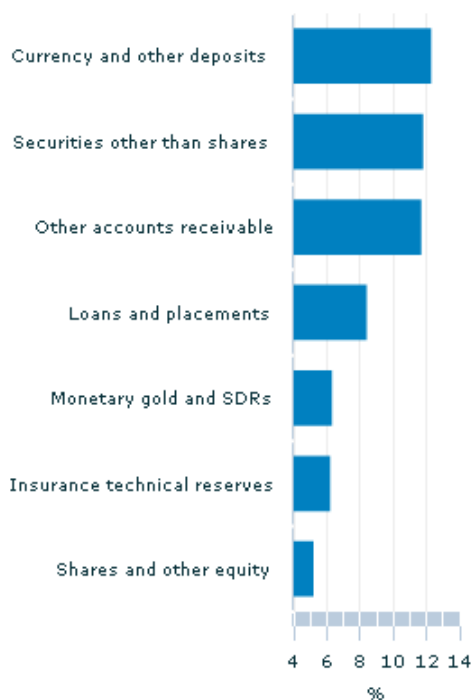
Real financial assets(a) per capita(b)



Footnote(s): (a) Reference year 2007-08. (b) At 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0); ABS Australian Demographic Statistics (cat. no. 3101.0)

Real financial assets(a) per capita - average annual growth rate - 1999 to 2009(b)



Footnote(s): (a) Reference year 2007-08. (b) At 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0); ABS Australian Demographic Statistics (cat. no. 3101.0)

FINANCIAL ASSETS

Australia's financial assets (i.e. currency, shares, loans and other securities) with the rest of the world more than doubled in real per capita terms between June 1999 and June 2009 (up by 7.7% per year) from \$22,100 to \$46,500 (in 2007-08 prices). However financial assets are only a small part of total assets, accounting for 12% in real terms in June 2009, up from 7% in June 1999.

Shares and other equity, while accounting for almost half of financial assets per capita in June 2009 (47%, down from 60% in June 1999), grew by an average of 5.2% per year between 1999 and 2009 in real terms. Currency and other deposits and Securities other than shares all grew at a significantly faster rate in real terms (around 12% per year) although each has come from a relatively lower base (accounting for 8% and 23% respectively of all financial assets).

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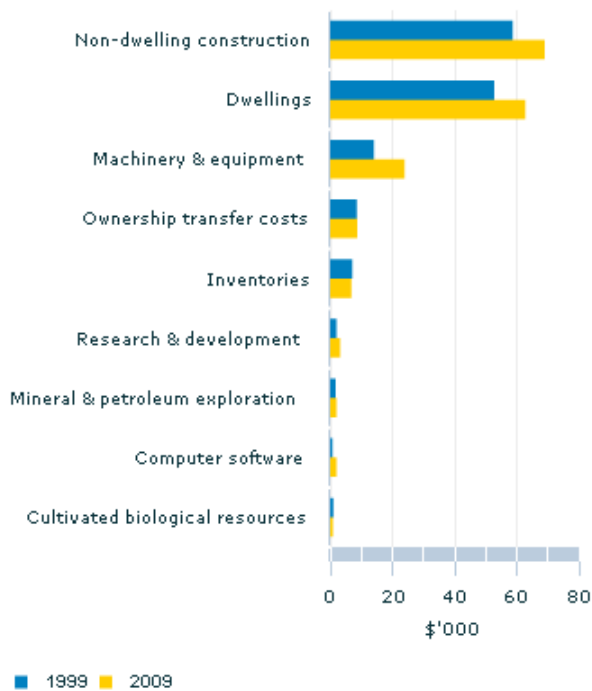
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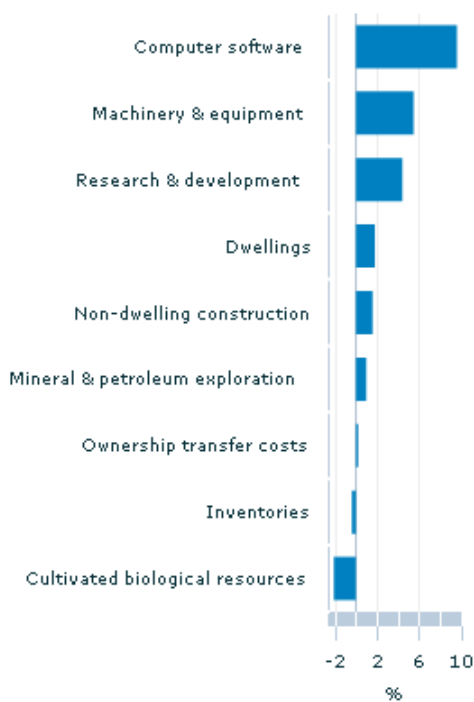
Real produced assets(a) per capita(b)



Footnote(s): (a) Reference year 2007-08. (b) At 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0); ABS Australian Demographic Statistics (cat. no. 3101.0)

Real produced assets(a) per capita - average annual growth rate - 1999-2009(b)



Footnote(s): (a) Reference year 2007-08. (b) At 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0); ABS Australian Demographic Statistics (cat. no. 3101.0)

NON-FINANCIAL ASSETS

Non-financial assets accounted for the majority of all national assets (88%) in June 2009. Between June 1999 and June 2009, real non-financial assets per capita grew by about 1.0% per year, rising from \$312,400 to \$345,200 (in 2007-08 prices). Non-financial assets comprise assets made or cultivated by people ('produced assets') and natural resources used for economic purposes ('non-produced assets').

Between June 1999 and June 2009, real produced assets per capita grew by around 2.0% per year, increasing from \$149,000 in 1999 to \$181,500 in 2009. Of these assets, computer software (up by 9.6% per year), machinery and equipment (up 5.5% per year) and research and development (up 4.4% per year) grew most strongly between 1999 and 2009, although software and research and development only accounted for a small proportion of total assets (0.5% and 0.8% respectively). Non-dwelling construction and dwellings accounted for 18% and 16% each of total real assets in June 2009, and experienced an average growth rate of 1.6% and 1.8% per year respectively.

Non-produced assets are estimates of the value of some of Australia's natural resources, such as land, mineral resources, subsoil assets and native timber available for log production. Although largely the result of natural endowment, exploration and development increase the economic value of these assets. Real non-produced assets declined slightly (0.2% a year) on a per capita basis from \$166,300 in June 1999 to \$163,700 in June 2009, indicating that the population is growing faster than the value of these national resources.

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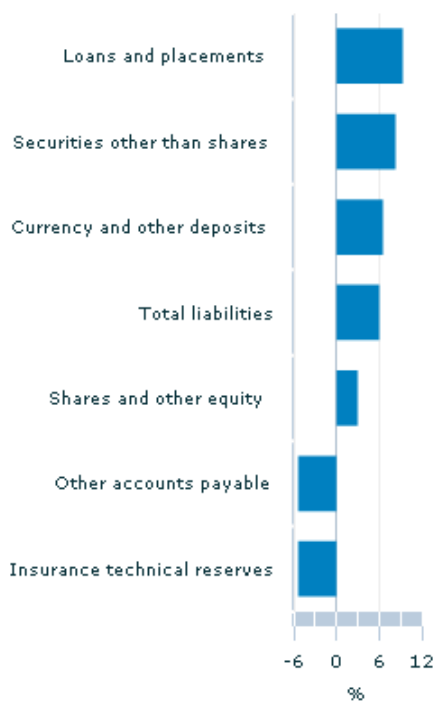
Real liabilities(a) per capita(b)



Footnote(s): (a) Reference year 2007-08. (b) At 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0); ABS Australian Demographic Statistics (cat. no. 3101.0)

Real liabilities(a) per capita - average annual growth rate - 1999 to 2009(b)



Footnote(s): (a) Reference year 2007-08. (b) At 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0); ABS Australian Demographic Statistics (cat. no. 3101.0)

LIABILITIES

Australia's real per capita liabilities to the rest of the world rose by 6.0% per year from \$43,400 in June 1999 to \$77,400 in June 2009 (in 2007-08 prices).

Loans and placements showed the highest growth rate (9.3% per year), followed by Securities other than shares (8.3% per year) and Currency and deposits (6.5% per year). Shares and other equity (3.0% per year) also showed strong growth. Securities other than shares (46%) and Shares and other equity (33%) together accounted for the majority (79%) of all real per capita liabilities in June 2009.

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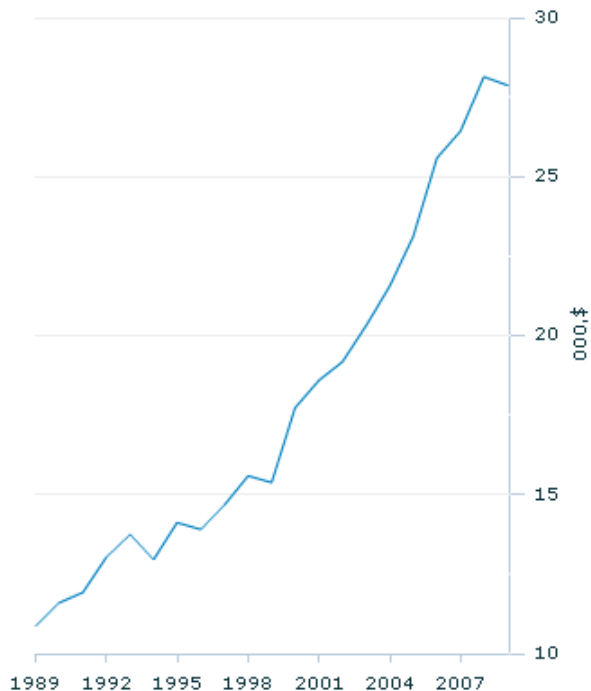
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National wealth

Real net foreign debt(a) per capita(b)



Footnote(s): (a) Reference year 2007-08. (b) At 30 June.

Source(s): ABS Balance of Payments and International Investment Position, September 2009 (cat. no. 5302.0); ABS Australian Demographic Statistics (cat. no. 3101.0)

FOREIGN DEBT

In recent years, Australia's debt to the rest of the world has increased. Real net foreign debt grew on average by 6.1% per year on a per capita basis between June 1999 and June 2009, increasing from \$15,400 to \$27,900 (in 2007-08 prices).

The growth in a country's foreign debt can reflect several related influences. The value of its imports and other current payments to foreigners may outstrip the value of its exports and other current receipts from foreigners – if so, the nation experiences a deficit on its current account which must be funded. The value of foreign debt is also influenced by exchange rate and price fluctuations and the current composition of the debt.

Current account deficits and saving shortfalls are conceptually the same phenomenon; they may be financed by, say, selling equity in enterprises to residents of other countries, or by borrowing from residents of other countries, or by running down financial assets held abroad. An alternative view is that the saving of a country's residents may be outstripped by its needs for investment – i.e. the country experiences a shortfall in saving.

Australia's net foreign debt is the net outcome of:

- Australian liabilities to overseas (\$567b in current-price terms in June 2009).
- Foreign liabilities to Australia (\$1,201b in current-price terms in June 2009).

Debt liabilities can be held by the public sector (for example, Commonwealth, state and local government, the Reserve Bank and other public sector corporations) and the private sector (for example, private financial and non-financial corporations). The public sector and private sector components of foreign debt showed markedly different trends during the past decade.

The real net foreign debt per capita of the public sector fell from \$2,300 in June 1999 to a low of -\$800 in June 2007 before rising again to \$1,600 in June 2009. The real net foreign debt per capita of the private sector rose steadily from \$13,100 in June 1999 to a peak of \$27,200 in June 2007 before falling to \$26,200 in June 2009.

Real net foreign debt(a) per capita by sector

	30 June 1999	30 June 2009	Average annual growth rate
	\$	\$	%
General government	1 554	1 540	-0.1
Other public sector	775	98	-18.7
<i>Total public sector</i>	<i>2 329</i>	<i>1 638</i>	<i>-3.5</i>
Private financial corporations	9 756	19 255	7.0
Private non-financial corporations	3 304	6 988	7.8
<i>Total private sector</i>	<i>13 059</i>	<i>26 243</i>	<i>7.2</i>
Australia	15 388	27 881	6.1

(a) Reference year 2007-08.

Sources: ABS Balance of Payments and International Investment Position, September 2009 (cat. no. 5302.0); ABS Australian Demographic Statistics (cat. no. 3101.0)

Australia's capacity to service its foreign debt

Australia must pay income (profits, or dividends interest, or allocate a proportion of retained earnings) on foreign holdings of Australian equity and debt, which are both forms of liability to foreign residents. However, if by incurring those liabilities Australia has been able to acquire capital or other assets that enhance its productive capacity and income-generating potential, then the increased liabilities may not, on balance, have a deleterious impact on progress. During the past decade, Australia's debt servicing ratio has deteriorated from 9.5% in 1998–99 to 10.5% in 2008–09.

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WHAT ASSETS DOES AUSTRALIA OWN?

The composition of Australia's total assets has been fairly stable during the past decade. There has been a decline in the relative importance of real non-produced assets (42% in June 2009, down from 50% in June 1999), and increases in the importance of produced and financial assets.

In June 2009, significant assets included:

- land (38% of the total, down from 47% in 1999) and subsoil assets (4%, down marginally from 1999)
- dwellings (16%, up marginally from 1999) and non-dwelling construction (18%, down marginally from 1999)
- machinery and equipment (6%, up from 4% in 1999)
- financial assets with the rest of the world (12%, up from 7% in 1999)

Further information is included in the following pages to show how the major component of Australia's produced assets, capital stock, and a particular non-produced asset, energy and mineral resources, have changed over time.

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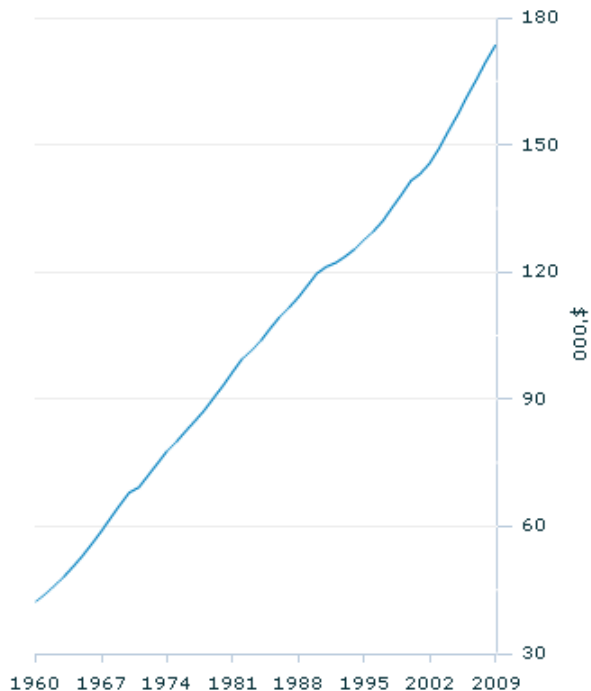
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National wealth

Net capital stock(a) per capita(b)



Footnote(s): (a) Chain volume measure; reference year 2007-08. (b) At 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0); ABS Australian Demographic Statistics (cat. no. 3101.0)

CAPITAL STOCK

Machinery, buildings and some other fixed produced assets collectively referred to as capital stock are used in the production of goods and services, and are an important repository of national wealth. Most (96%) of Australia's produced asset value is made up of capital stock, with the value of inventories making up the balance.

Net capital stock, that is the net present value of the future capital services to be provided by these assets, grew on average by 2.3% per year on a per capita basis between June 1999 and June 2009, increasing from \$138,200 to \$173,500 (in 2007-08 prices). In June 2009, fixed assets accounted for 45% of the total value of Australia's assets, up from 43% in June 1999.

The increase in capital stock has in turn led to an increase in capital services used per unit of labour input (a process known as 'capital deepening'). During the past decade, Australia's capital-labour ratio rose by 33% (averaging 2.9% per year). This has contributed to an increase in labour productivity.

The growth of a nation's net capital stock depends on the relative pace of two offsetting factors – investments (or 'capital formation') which increase the stock, and retirements and depreciation which reduce it.

Diverse trends may underlie the aggregate growth pattern, such as shifts in the composition of economic activity toward industries that are more or less capital intensive, or more or less rapid capital deepening in individual industries. Technological changes – for example, the recent rapidly increasing importance of computer and communications hardware and software – have been a major driver of such trends.

Between June 1999 and June 2009, the types of capital showing the most rapid growth on a per capita basis were computer software (up 9.6% per year), machinery and equipment (up 5.5% per year) and

research and development (4.4%).

Between June 1999 and June 2009, the industries showing the most rapid growth in net capital stock were professional, scientific and technical services (up 8.1% per year), rental, hiring and real estate services (up 6.7% per year), mining (up 6.2% per year) and other services (up 11.9% per year).

Net capital stock(a) per capita

	30 June 1999	30 June 2009	Average annual growth rate %
	\$	\$	
Dwellings	52 710	62 784	1.8
Non-dwelling construction	58 668	68 989	1.6
Machinery and equipment	14 086	23 950	5.5
Research and development	2 071	3 176	4.4
Mineral and petroleum exploration	1 788	1 975	1.0
Computer software	787	1 961	9.6
Cultivated biological resources	1 040	844	-2.1
Ownership transfer costs	8 517	8 675	0.2
All assets(b)	138 209	173 459	2.3

(a) Chain volume measure; reference year 2007-08. Components may not sum to totals.

(b) Includes weapons systems and artistic originals.

Sources: ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0); ABS Australian Demographic Statistics (cat. no. 3101.0).

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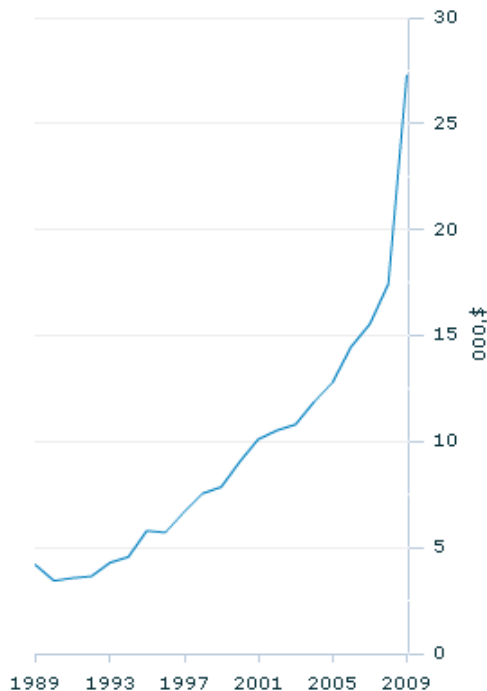
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National wealth

Economically demonstrated resources(a)(b) per capita(c)



Footnote(s): (a) Current prices. (b) Minerals and energy, net present value of demonstrated subsoil resources. (c) At 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0); ABS Australian Demographic Statistics (cat. no. 3101.0)

NON-PRODUCED ASSETS: MINERAL AND ENERGY RESOURCES

Australia has many types of natural assets. Subsoil assets are of major economic significance and are discussed here. Air, water, soil, and biodiversity resources are discussed in other sections.

The growth of a nation's stock of subsoil assets broadly depends on the relative pace of two offsetting influences – discoveries which increase the stock, and extractions which reduce it. The former significantly outstripped the latter during the 1990s, as was the case for most of the 20th century.

In recent years, there has been continued growth in Australia's known mineral resources, or economically demonstrated resources (EDR). Increases in EDR were due to on-going drilling and evaluation of known deposits resulting in the re-assessment of resources from inferred or sub-economic categories into EDR and the discovery of new deposits or extensions of known deposits (Geoscience Australia 2008).

Sustained increases in prices for most metal and mineral commodities over recent years have allowed companies to re-assess the economic viability of lower grade resources and deposits which previously were considered to be uneconomic. Overall this has contributed to an increase in EDR for many metal and mineral commodities (Geoscience Australia 2008). In other words, without necessarily making new discoveries, large sustained price increases for mineral and resource exports have led to a major increase in the value of existing identified resources. For more information on import and export price changes (i.e. changes to Australia's terms of trade) during the decade to June 2009, see the National income section.

The net present value of Australia's EDR per capita grew on average by around 13.3% a year between June 1999 and June 2009.

In 2007 Australia's economically demonstrated resources of brown coal, mineral sands (rutile and zircon),

nickel, uranium, zinc and lead remained the world's largest, while antimony, bauxite, black coal, copper, gold, iron ore, industrial diamond, ilmenite, lithium, manganese ore, niobium, silver and tantalum rank in the top six worldwide (Geoscience Australia 2008).

Among the minerals showing strongest annual growth in net present value per capita of EDR in current-price terms between June 1999 and June 2009 were gold (up 51.2%), iron ore (up 23.6%), copper (up 23.0%) and nickel (up 20.3%).

Economically demonstrated resources(a)(b) per capita - by mineral

	30 June 1999	30 June 2009	Average annual growth rate
	\$	\$	%
Bauxite	250	184	-3.0
Black coal	1 648	7 037	15.6
Brown coal	35	89	10.0
Cobalt	39	89	8.8
Copper	416	3300	23.0
Gold	15	931	51.2
Iron ore	392	3276	23.6
Lead	80	154	6.7
Magnesite	87	81	-0.7
Mineral sands	213	311	3.9
Nickel	271	1 723	20.3
Petroleum - crude oil	658	2 512	14.3
Petroleum - natural gas	2 974	4 848	5.0
Petroleum - condensate	387	1 567	15.0
LPG naturally occurring	193	588	11.8
Silver	27	69	10.0
Uranium	111	173	4.5
Zinc	51	292	19.1
Other minerals	18	70	14.4
All minerals	7 864	27 294	13.3

(a) Current prices.

(b) Minerals and energy, net present value of demonstrated subsoil resources.

Sources: ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0); ABS Australian Demographic Statistics, September 2009 (cat. no. 3101.0).

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National wealth

LINKS TO OTHER DIMENSIONS OF PROGRESS

The connections between wealth and income are discussed in this section and in the National income section. The link between wealth and economic hardship is discussed in the Household economic wellbeing section.

The buildings and infrastructure used to deliver education, health and other services are important components of wealth, as are natural assets such as land and minerals.

See also the sections linked below:

RELATED PAGES

- [National income](#)
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NATIONAL WEALTH GLOSSARY

Asset

Assets are entities functioning as stores of value and over which ownership rights are enforced by institutional units, individually or collectively, and from which economic benefits may be derived by their owners by holding them, or using them, over a period of time (the economic benefits consist of primary incomes derived from the use of the asset and the value, including possible holding gains/losses, that could be realised by disposing of the asset or terminating it). See 'Financial assets' and 'non-financial assets'.

Australian resident

See 'Estimated resident population (ERP)'.

Average annual growth rate

The average annual growth rate is calculated as a percentage using the formula $[(P_n/P_0)^{1/n} - 1] \times 100$, where P_0 is the value at the start of the period, P_n is the value at the end of the period and n is the length of the period between P_0 and P_n in years.

Capital formation

See 'Gross fixed capital formation'.

Capital-labour ratio

Capital services used per unit of labour input.

Chain price indexes

Annually-reweighted chain Laspeyres price indexes referenced to the same year as the chain volume measures. They can be thought of as a series of indexes measuring price change from a base year to quarters in the following year using current price values in the base year as weights, linked together to form a continuous time series. In other words, chain price indexes are constructed in a similar fashion to the chain volume indexes. Quarterly chain price indexes are benchmarked to annual chain price indexes in the same way as their chain volume counterparts. Unlike implicit price deflators, chain price indexes measure only the impact of price change.

Chain volume measures

Annually-reweighted chain Laspeyres volume indexes referenced to the current price values in a chosen reference year (i.e. the year when the quarterly chain volume measures sum to the current price annual values). Chain Laspeyres volume measures are compiled by linking together (compounding) movements in volumes, calculated using the average prices of the previous financial year, and applying the compounded movements to the current price estimates of the reference year. Quarterly chain volume estimates are benchmarked to annual chain volume estimates, so that the quarterly estimates for a financial year sum to the corresponding annual estimate.

Generally, chain volume measures are not additive. In other words, component chain volume measures do not sum to a total in the way original current price components do. In order to minimize the impact of this property, the ABS uses the latest base year as the reference year. By adopting this approach, additivity exists for the quarters following the reference year and non-additivity is relatively small for the quarters in the reference year and the quarters immediately preceding it. The latest base year and the reference year will be advanced one year with the release of the September quarter issue of this publication. A change in reference year changes levels but not growth rates, although some revision to recent growth rates can be

expected because of the introduction of a more recent base year (and revisions to the current price estimates underlying the chain volume measures).

Consumption of fixed capital

Also known as depreciation, it is the reduction in the value of fixed assets used in production during the accounting period resulting from physical deterioration, normal obsolescence or normal accidental damage. Unforeseen obsolescence, major catastrophes and the depletion of natural resources are not taken into account.

Current prices

Estimates are valued at the prices of the period to which the observation relates. For example, estimates for 2007-08 are valued using 2007-08 prices. This contrasts to chain volume measures where the prices used in valuation refer to the prices of a previous period.

Debt

Debt is considered to be any liability that is not equity.

Debt servicing ratio

The debt servicing ratio is a commonly used measure of a country's capacity to pay the costs associated with debt. It is calculated by dividing export earnings (goods and services credits) into the net interest payments (income accrued and payable on net foreign debt).

Deflation

See 'Inflation'.

Depreciation

The accounting process of systematically allocating the cost less estimated residual value of an asset over its expected useful life. Depreciation as recorded in government financial records may deviate considerably from consumption of fixed capital as depreciation is normally calculated using the original costs of fixed assets. See 'Consumption of fixed capital'.

Domestic final demand

Domestic final demand is the sum of private and government final consumption expenditure and private and public gross fixed capital expenditures.

Dwellings

Dwellings are buildings that are used entirely or primarily as residences, including any associated structures, such as garages, and all permanent fixtures customarily installed in residences. Houseboats, barges, mobile homes and caravans used as principal residences of households are also included, as are historic monuments identified primarily as dwellings. The costs of site clearance and preparation are also included in the value of dwellings.

Economically demonstrated resources (EDR)

Economically demonstrated resources reflects the volume of subsoil assets available for production. EDR are those resources that have a very high probability of existence and are economically feasible to extract, given current technology and relative prices.

Economically demonstrated resources (EDR) per capita

The ratio of EDR to an estimate of the resident Australian population. Population estimates use data published in the quarterly publication ABS Australian Demographic Statistics (cat. no. 3101.0) and ABS projections.

Equity

Equity is that part of the issued capital of an enterprise which acknowledges a claim on the residual value of the enterprise after the claims of all other creditors have been met. It includes ordinary and participating preference shares, any reinvested earnings, and equity in unincorporated enterprises.

Estimated resident population (ERP)

The official measure of the population of Australia is based on the concept of usual residence. It refers to all people, regardless of nationality or citizenship, who usually live in Australia, with the exception of foreign diplomatic personnel and their families. It includes usual residents who are overseas for less than 12 months. It excludes overseas visitors who are in Australia for less than 12 months.

Exports

Goods which subtract from the stock of material resources in Australia, as a result of their movement out of the country. These goods have been produced or manufactured in Australia.

Exports of goods and services

The value of goods exported and amounts receivable from non-residents for the provision of services by residents.

Final consumption expenditure

Net expenditure on goods and services by persons, expenditure of a current nature by private non-profit institutions serving households and net expenditure on goods and services (which does not result in the creation of fixed assets or inventories or in the acquisition of land and existing buildings or second-hand assets) by public authorities other than those classified as public corporations. See 'Final consumption expenditure - general government' and 'Final consumption expenditure - households'.

Final consumption expenditure - general government

Net expenditure on goods and services by public authorities, other than those classified as public corporations, which does not result in the creation of fixed assets or inventories or in the acquisition of land and existing buildings or second-hand assets. It comprises expenditure on compensation of employees (other than those charged to capital works, etc.), goods and services (other than fixed assets and inventories) and consumption of fixed capital. Expenditure on repair and maintenance of roads is included. Fees, etc., charged by general government bodies for goods sold and services rendered are offset against purchases. Net expenditure overseas by general government bodies and purchases from public corporations are included. Expenditure on defence assets that are used in a fashion similar to civilian assets is classified as gross fixed capital formation; expenditure on weapons of destruction and weapon delivery systems is classified as final consumption expenditure.

Final consumption expenditure - households

Net expenditure on goods and services by persons and expenditure of a current nature by private non-profit institutions serving households. This item excludes expenditures by unincorporated businesses and expenditures on assets by non-profit institutions (included in gross fixed capital formation). Also excluded are maintenance of dwellings (treated as intermediate expenses of private enterprises), but personal expenditure on motor vehicles and other durable goods and the imputed rent of owner-occupied dwellings are included. The value of 'backyard' production (including food produced and consumed on farms) is included in household final consumption expenditure and the payment of wages and salaries in kind (e.g. food and lodging supplied free to employees) is counted in both household income and household final consumption expenditure.

Financial assets

Financial assets are mostly financial claims. Financial claims entitle the owner to receive a payment, or a series of payments, from an institutional unit to which the owner has provided funds. The exceptions are

monetary gold, Special Drawing Rights (SDRs), and shares, which are treated as financial assets even though there is no financial claim on another institutional unit.

Financial assets include insurance technical reserves, monetary gold, SDRs, other accounts receivable/payable, securities other than shares, and shares and other equity.

Financial assets with the rest of the world

Foreign financial assets held by Australians (such as foreign shares, deposits and loans). See 'Financial assets'.

Financial corporations

Financial corporations comprise all resident corporations and quasi-corporations mainly engaged in financial intermediation and provision of auxiliary financial services. For example, they borrow and lend; provide superannuation, life, health or other insurance services, or financial leasing services; or they invest in financial assets. Holding companies with mainly financial corporations as subsidiaries are also included, as are market NPIs that mainly engage in financial intermediation or production of auxiliary financial services. Mostly these enterprises are incorporated but large unincorporated enterprises such as unit trusts and superannuation funds are included in this sector if they qualify as quasi-corporations. This broad sector is broken down into eight sub-sectors: Central Bank; Banks; Other depository corporations; Life insurance; Pension funds; Other insurance corporations; Central borrowing authorities; and Financial intermediaries and auxiliaries n.e.c.

Fixed assets

Fixed assets are produced assets that are used repeatedly or continuously in production processes for more than one year.

Foreign debt assets

A nation's gross debt claims on the rest of the world. See **net foreign debt**.

Foreign debt liabilities

A nation's gross debt liabilities to the rest of the world. See **net foreign debt**.

General government sector

General government consists of all government units and non-market NPIs that are controlled and mainly financed by government. It mainly comprises Commonwealth, State and local government departments, offices and other bodies that are primarily engaged in production of goods and services outside the normal market mechanism. Statistics for this broad sector are broken down into two levels of government (LOG): National government; and State and local government.

All units that have a national role or function are classified to the National government sector. The fact that a unit is controlled by the Commonwealth Government is *prima facie* (but not necessarily conclusive) evidence that the unit has a national role or function. The only multi-jurisdictional units currently classified to the National LOG are the public universities which are mainly financed and partly controlled by the Commonwealth Government but are subject to a degree of control by the establishing State or Territory Government. All units that have a State or Territory, or a local, role or function are classified to the State and local government sector.

Gross disposable income - households (National Accounts basis)

Gross household income less income tax payable, other current taxes on income, wealth etc., interest on dwellings, consumer debt interest, interest payable by unincorporated enterprises, rent on natural assets, net non-life insurance premiums, social contribution for workers' compensation and other current transfers payable by households.

Gross domestic product (GDP)

The total market value of goods and services produced in Australia within a given period after deducting the cost of goods and services used up in the process of production but before deducting allowances for the consumption of fixed capital. Thus gross domestic product, as here defined, is 'at market prices'. It is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services.

GDP per capita

The ratio of the chain volume estimate of GDP to an estimate of the resident Australian population. Population estimates use data published in the quarterly publication ABS Australian Demographic Statistics (cat. no. 3101.0) and ABS projections.

GDP per hour worked

The ratio of the chain volume estimate of GDP to an estimate of hours worked. Hours worked estimates are derived as the product of employment and average hours worked. Movements in chain volume estimates of GDP per hour worked are commonly interpreted as changes in labour productivity. However, it should be noted that these measures reflect not only the contribution of labour to changes in production per hour worked, but also the contribution of capital and other factors (such as managerial efficiency, economies of scale, etc.).

Gross fixed capital formation

The value of acquisitions of new and existing produced assets, other than inventories, less the value of disposals of new or existing produced assets, other than inventories.

Household sector (National Accounts basis)

Includes all non-financial unincorporated enterprises that are owned and controlled by households and are not included in the private non-financial corporations sector. Most business partnerships and sole proprietorships are included because their owners combine their business and personal affairs and do not keep separate accounts for their business operations and therefore do not qualify as quasi-corporations. Although private non-market non-profit institution serving households, such as clubs and charities, are included in a separate sector in the Standard Economic Sector Classification of Australia (SESCA) (ABS cat. no. 1218.0), in this publication such non-profit institutions are included with the household sector because separate information about their financial operations is not available.

A household is a small group of persons who share the same living accommodation, who pool some, or all, of their income and wealth and who consume certain types of goods and services collectively, mainly housing and food. Households include group households of unrelated persons, same-sex couple households, single-parent households as well as one-person households. A household usually resides in a private dwelling (including caravans etc. in caravan parks). Persons usually resident in non-private dwellings, such as hotels, motels, boarding houses, jails and hospitals, are not included in household estimates. This definition of a household is consistent with the definition used in the Census. The number of households can be either based on count or estimated resident population.

Household net worth per capita

Net worth per capita held by households and not by general government, financial corporations or non-financial corporations.

Implicit price deflator

Obtained by dividing a current price value by its real counterpart (the chain volume measure). When calculated from the major national accounting aggregates, such as gross domestic product, implicit price deflators relate to a broader range of goods and services in the economy than that represented by any of the individual price indexes that are published by the ABS. Whereas the chain price indexes are chain Laspeyres indexes, the annual implicit price deflators are chain Paasche price indexes, i.e. each year-to-year movement is calculated using the current price value shares of the second of the two years to weight together the elemental price indexes.

Movements in implicit price deflators can be greatly affected by changes in the physical composition of the aggregates and their components. For this reason, quarterly implicit price deflators derived from seasonally adjusted or trend data are preferred to those derived using original data.

Imports

Imports reflect goods that arrive in the country and include:

- goods brought into Australia directly for home consumption following the payment of any duty; plus
- goods which enter the country but are not cleared for home consumption; the goods instead go into Customs (bonded) warehouses and duty is not paid at that time.

Imports of goods and services

The value of goods imported and amounts payable to non-residents for the provision of services to residents.

Inflation (deflation)

A term commonly used to refer to changes in price levels. A rise in prices is called inflation, while a fall is called deflation.

Institutional sectors

The groupings of all resident institutional units according to their institutional characteristics and functions. Five institutional sectors are recognised: the non-financial corporations sector, the financial corporations sector, the general government sector, the households sector and the non-profit institutions serving households sector.

Institutional units

An institutional unit is an economic entity that is capable, in its own right, of owning assets, incurring liabilities, and engaging in economic activities and in transactions with other entities. There are two main types of institutional units, namely persons or groups of persons in the form of households, and legal or social entities whose existence is recognised by law or society independently of the persons, or other entities, that may own or control them. The individual members of multi-person households are not treated as separate institutional units. Legal or social entities that engage in economic activities in their own right, such as a corporation, NPI or government unit, are considered institutional units as they are responsible and accountable for the economic decisions or actions they take.

Labour productivity

See 'GDP per hour worked'.

Liability

A liability is an obligation which requires one unit (the debtor) to make a payment or a series of payments to the other unit (the creditor) in certain circumstances specified in a contract between them.

Liabilities to the rest of the world

Liabilities owed by Australian residents to overseas entities. Australia's liabilities to the rest of the world include borrowings from overseas and foreign holdings of Australian currency, shares and other securities.

Loans and placements

Loans are borrowings which are not evidenced by the issue of debt securities, and are not usually traded. Examples are an overdraft from a bank, money lent by a building society with a mortgage over a property as collateral, and a financial lease agreement with a finance company. Repurchase agreements are treated as purchases and sales of debt securities, not collateralised loans. Placements are customers'

account balances with entities not regarded as deposit-taking institutions. Examples are account balances of State and local public non-financial corporations with their central borrowing authorities, of public sector pension funds with their State Treasuries, and 11am money placed with corporate treasuries.

National accounts

Systematic quantitative summary of the Australian economy as a whole.

National assets

The sum of non-financial assets (produced and non-produced) and financial assets with the rest of the world owned by Australian residents. See 'Asset', 'Financial assets with the rest of the world', 'Non-financial assets', 'Produced assets', 'Non-produced assets' and 'Resident'.

National liabilities

See 'Liabilities to the rest of the world'.

National net saving

Calculated as the sum of the net saving of each of the resident sectors - households (includes unincorporated enterprises and private non-profit institutions serving households), non-financial corporations, financial corporations and general government. Also referred to as net saving.

National saving ratio

The ratio of national net saving to national net disposable income. National net saving is calculated as national net disposable income less final consumption expenditure. National net disposable income is calculated as national gross disposable income less consumption of fixed capital.

National net worth

National assets less national liabilities. See 'National assets' and 'National liabilities'.

Net capital stock

The accumulation of past investment flows less retirements, less accumulated capital consumption on the same items. Assets included in net capital stock are machinery, buildings and some other fixed produced assets used in the production of goods and services. See 'Perpetual inventory method (PIM)'.

Net foreign debt

The net sum of foreign debt liabilities and foreign debt assets.

Net present value

An estimate of value or net benefit (in present terms) over the lifetime of an investment or project. Net present value (NPV) takes into account factors such as current production rates, prices, costs, and discount rates when ascribing a value to an investment or project.

Net worth

Assets less liabilities and shares/contributed capital. For the general government sector, net worth is assets (both financial and non-financial) less liabilities since shares and contributed capital is zero. It is an economic measure of wealth and reflects the contribution of governments to the wealth of Australia.

Non-financial assets

Any asset that is not in the form of a financial claim on another economic unit, monetary gold or a statutory reserve deposit at the International Monetary Fund.

Non-financial corporations

All resident corporations and quasi-corporations mainly engaged in the production of market goods and/or non-financial services, and holding companies with mainly non-financial corporations as subsidiaries. Also included are non-profit institutions that mainly engage in market production of goods and non-financial services.

Non-produced assets

Non-produced assets are non-financial assets that come into existence other than through processes of production.

Non-resident

Any economic entity (individual, enterprise or other organisation) ordinarily domiciled in a country other than Australia.

See 'Estimated resident population (ERP)'.

Perpetual inventory method (PIM)

The PIM is a method of constructing estimates of capital stock and consumption of fixed capital from time series of gross fixed capital formation. It allows an estimate to be made of the stock of fixed assets in existence and in the hands of producers which is generally based on estimating how many of the fixed assets, installed as a result of gross fixed capital formation undertaken in previous years, have survived to the current period.

Australian estimates of capital stock are based on the PIM, which involves compiling a 'rolling inventory' of the capital stock based on historical data about investment flows. In a given year, investments in capital assets are added to the stock, and retirements of assets are deducted from the stock.

Produced assets

Produced assets are non-financial assets that have come into existence as outputs from production processes. Produced assets consist of fixed assets and inventories.

Public sector

The combination of the general government sector, the public non-financial corporations and the public financial corporations.

Real

It is possible to deflate measures of income and wealth by a price index in order to measure purchasing power. By comparing the deflated value of the income with the actual value of the income, it is possible to determine by how much the real purchasing power of the income or wealth has increased or decreased. Aggregates deflated in this way is generally described as "real". Real income or wealth is measured with reference to the price level in some selected reference year. Thus real values cannot exist in isolation, rather they vary depending upon the choice of reference year.

Reference period

Refers to the period that provides the weights for an index.

Resident

Residents are those entities that have a closer association with the territory of Australia than with any other territory. Examples are: general government bodies; financial and trading enterprises and non-profit bodies producing goods or services or both within the territory of Australia; and persons whose centre of interest is considered to lie in Australia. Any entity which is not determined to be a resident of Australia is classified as a resident of the rest of the world. See 'Estimated resident population'.

Resident unit

A unit with a centre of economic interest in the economic territory of the country.

Rest of the world

The rest of the world consists of all non-resident institutional units that enter into transactions with resident units, or have other economic links with resident units.

RELATED PAGES

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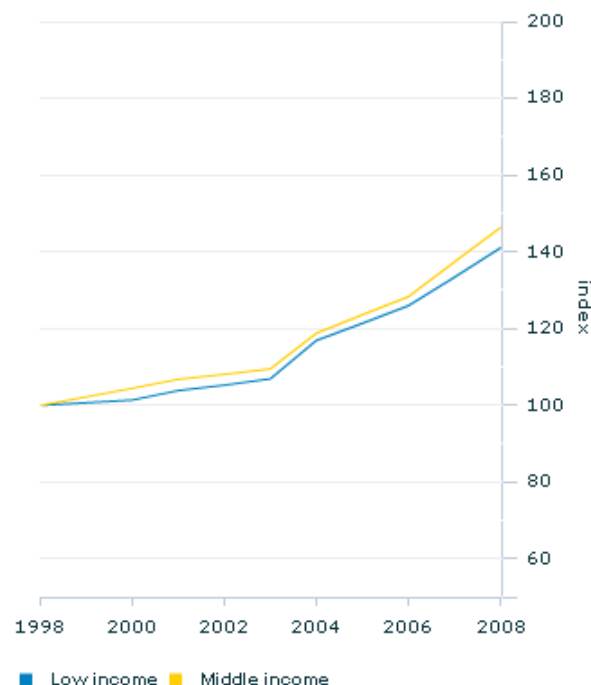
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Household economic wellbeing



Average real equivalised disposable household weekly income(a)(b)(c)

In the decade to 2007-08, the average real equivalised disposable household weekly income for people in the low income group increased by 41%.

Over the same period, the average real equivalised disposable household weekly income increased by 46% for middle income people.

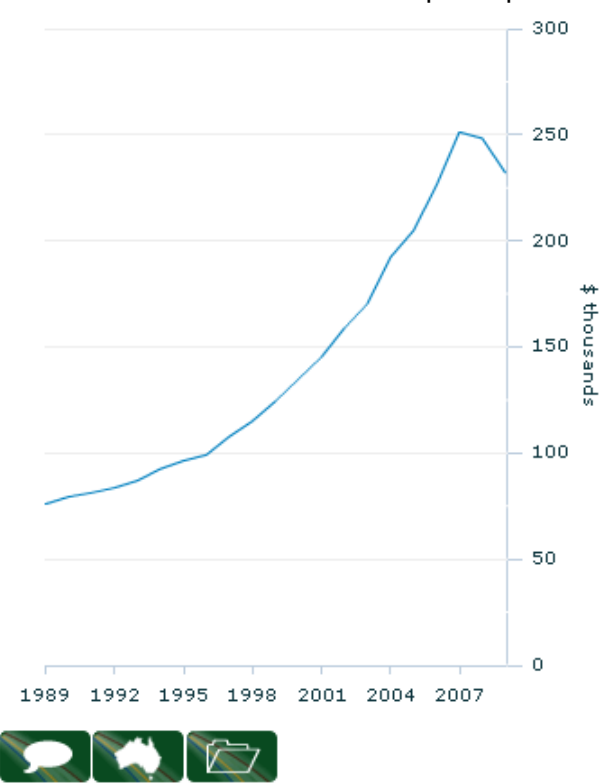
(a) Year ending 30 June. (b) Base year is 1997-98 and equals 100. Based on 2007-08 dollars, adjusted using changes in the Consumer Price Index. (c) Data has been interpolated for years ended 30 June 1999, 2002, 2005 and 2007.

[Commentary](#)

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Total household sector net worth per capita



HOUSEHOLD ECONOMIC WELLBEING AND PROGRESS

Household economic wellbeing is largely determined by a household's command over its economic resources and, in turn, its ability to maintain a minimum material standard of living. Household economic resources provide the means through which households fund their consumption of goods and services. It relates to progress by measuring the acquisition of goods and services used for the direct satisfaction of individual or collective wants and needs. The economic resources of income (both in the form of receipts and as the direct provision by government of goods and services, such as free or subsidised healthcare) and wealth, and the availability of both to fund consumption, can be used to measure household economic wellbeing and progress.

While there is no widely accepted single measure of household economic wellbeing, for most people the level of income that they and other family members receive is a major determinant of household economic resources. People living in households with low income may be less likely to have sufficient economic resources to support an acceptable standard of household economic wellbeing. While income is usually received by individuals, it is normally shared between partners in a couple relationship, with dependent children and with other members of the household. Moreover, when people share a dwelling, they enjoy the economies of scale in the provision of that housing, which is usually the largest single cost of living expense incurred by householders.

Therefore, the headline indicator of whether household economic wellbeing in Australia is getting better is average real equivalised disposable (after income tax) household weekly income of low income households. This measure is available every two years. Measures of household income are equivalised to take account of differing household size and composition, the sharing of income between household members and the economies of scale in sharing a dwelling. A more comprehensive 'final' income measure, that takes account of government goods and services provided free or at a subsidised rate, and of indirect taxes such as GST, is only available every six years.

Income is not the only economic resource available to people within a household. Household wealth is also an important economic resource and household net worth is included in this section as a supplementary measure of household economic wellbeing and progress. Like income, household wealth extends consumption possibilities. This is particularly relevant to households which are said to be 'asset rich and income poor.' For example, households with retired members may have low income levels but relatively high levels of wealth through the ownership of their home and other investments.

As both income and wealth are used as proxies for household consumption of goods and services, a more direct measure of household consumption is included in this section. This measure approximates household consumption by using real final consumption expenditure per capita of the household sector in the national accounts. Real final household sector consumption expenditure includes not only the consumption of householders, but also consumption of non-profit institutions serving households, such as churches, social and sporting clubs and associations etc. This measure excludes the free or subsidised consumption of services by households, such as for health and education. For the bottom 40% of the income distribution, these subsidised goods and services increase after tax incomes, and their consumption possibilities, by about 50%.

For a full list of definitions, please see the Household economic wellbeing glossary.

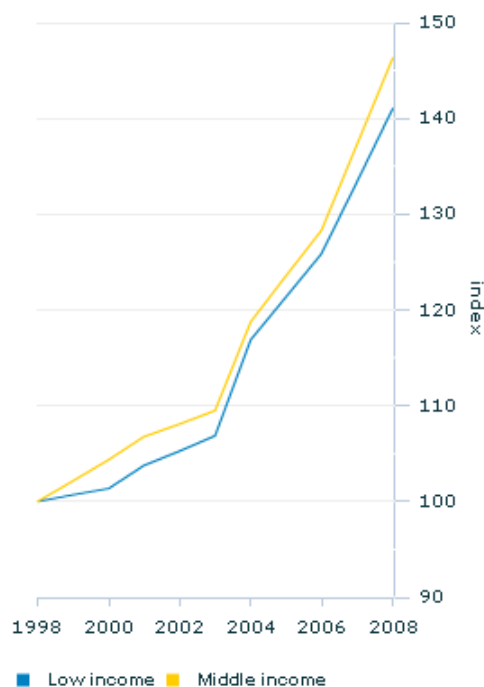
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Household economic wellbeing

Average real equivalised disposable household weekly income(a)(b)(c)



Footnote(s): (a) Year ending 30 June. (b) Base year is 1997-98 and equals 100. Based on 2007-08 dollars, adjusted using changes in the Consumer Price Index. (c) Data has been interpolated for years ended 30 June 1999, 2002, 2005 and 2007.

Source(s): ABS data available on request, 2007-08 Survey of Income and Housing

HOUSEHOLD INCOME

As household income is an important component of household economic resources, average real equivalised disposable household weekly income has been chosen as the headline indicator.

Analysis of income and expenditure data indicates that some households in the bottom decile of the income distribution tend to have higher levels of consumption (expenditure) than households with slightly higher levels of income, implying that they have greater access to other economic resources. This conclusion is supported by analysis of the wealth of these households. More than half of the people in the bottom income quintile are in higher wealth quintiles, and a third are in the top three wealth quintiles. Therefore the headline indicator includes a focus only on those households in the second and third lowest income deciles of the income distribution. This income group, on average, best represents the characteristics of the people most likely to have low living standards.

The headline indicator shows a rise in the real income of low income households between 1997-98 and 2007-08, with their average real equivalised disposable household weekly income increasing by 41% over this period. However, part of this increase reflects improvements to the way income was measured from 2003-04 onwards (Endnote 1).

It should be noted that the same individuals were not necessarily in the low income group for this entire period. For example, some of the households that had relatively low income in 1997-98 might, through changed circumstances, have moved up the income distribution by 2007-08. Others may have slipped into this group, perhaps by retiring and moving to an age pension, by losing their job, or because the death of a partner has reduced total household income. However, for those who did remain in the low income group, their rising income would, on average, have provided a capacity to increase their standard of living.

While the rise in the indicator may represent progress in an absolute sense, a relative view is also needed to consider changes in community standards which, over time, may raise the expected minimum level of living standards. Although there is no direct measure of this, one approach is to compare changes in the low income group with that of the middle income group (those in the fifth and sixth income deciles). The headline indicator shows that the middle income group had a slightly greater gain in real income between 1997-98 and 2007-08 than the low income group (46% compared with 41%).

ENDNOTES

1. Estimates presented for 2007–08 are not directly comparable with estimates for previous cycles due to improvements made to measuring income introduced in the 2007–08 cycle. Estimates for 2003–04 and 2005–06 have been recompiled to reflect the new measures of income, however not all components introduced are available to present the years on a comparable basis. See Appendix 4 of ABS Household Income and Income Distribution, Australia, 2007-08 (cat. no. 6523.0) for further information. ([link](#))

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HOUSEHOLD INCOME DISTRIBUTION

While the growth in average household income is a key measure of whether life in Australia is getting better, so too is change in the distribution (or equity) of income across the population. The ABS measures this in several different ways.

Percentile ratios are one measure of the spread of incomes across the population. For example, the P90/P10 ratio is the ratio of income at the 90th percentile (i.e. the income level dividing the bottom 90% of the population from the top 10%) to that at the 10th percentile. In 2007-08, this ratio was 4.30, meaning that the income of households at the 90th percentile was over four times as great as the income of households at the 10th percentile. This represented an increase of 14% from 1997-98 (3.77).

Ratios of incomes at the top of selected income percentiles(a)

Unit	Year		Change from 1997-98 to 2007-08	
	1997-98	2007-08	Absolute	%
P90/P10 Ratio	3.77	4.30	0.53	14.1
P80/P20 Ratio	2.56	2.63	0.07	2.7
P80/P50 Ratio	1.56	1.56	0.00	0.0
P20/P50 Ratio	0.61	0.59	-0.02	-3.3

(a) Equivalised disposable household income: reference year 2007-08.

Source: ABS Household Income and Income Distribution, Australia, 2007-08 (cat. no. 6523.0)

Another measure of income distribution is provided by the share of total income received by different income groups. In 2007-08, people in the high income group (the upper 20%) received 41% of the total share of income, compared with 10% for people in the low income group. A similar distribution pattern was evident in 1997-98 (38% compared with 11%).

A summary of income distribution is also given by the Gini coefficient, which provides a single statistical measure of the degree of income inequality. The Gini coefficient lies between 0 and 1, with perfect equality at zero and income inequality increasing as the Gini coefficient approaches 1. In 1997-98 the Gini coefficient was 0.303 compared with 0.331 in 2007-08, representing an increase of 9.2%.

Selected measures of equivalised disposable household income(a) and distribution

Indicator	Unit	Year		Change from 1997-98 to 2007-08	
		1997-98	2007-08	Absolute	%
Share of total income received by people with:					
Low incomes	%	10.8	10.1	-0.7	-6.5
Middle incomes	%	17.7	17.0	-0.7	-4.0
High incomes	%	37.9	40.5	2.6	6.9
Gini coefficient(b)	no.	0.303	0.331	0.028	9.2

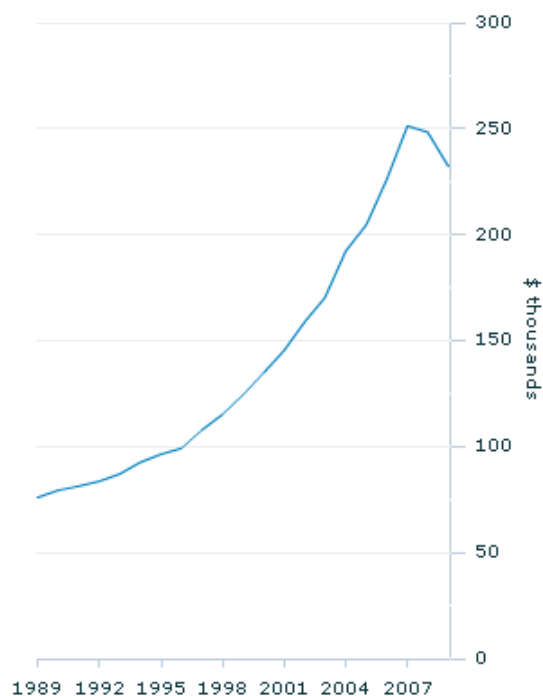
(a) Equivalised disposable household income: reference year 2007-08.

(b) A summary measure of income distribution between 0 and 1. If the measure approaches the value of 1 income inequality is higher and vice versa.

Source: ABS Household Income and Income Distribution, Australia, 2007-08 (cat. no. 6523.0)

Household economic wellbeing

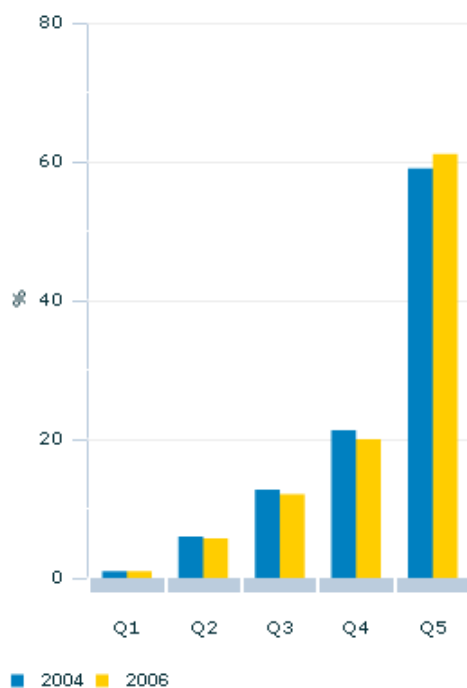
Total household sector net worth per capita(a)(b)



Footnote(s): (a) As at 30 June. (b) In current prices.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0); ABS Australian Demographic Statistics December 2009 (cat no. 3101.0)

Share of total household net worth by income quintile(a)(b)



Footnote(s): (a) As at 30 June. (b) Q1 is the lowest income quintile and Q5 is the highest income quintile.

HOUSEHOLD WEALTH

While people living in low income households are less likely to have sufficient command over economic resources, income is not the only economic resource that relates to household economic wellbeing. Households that have low levels of income may have relatively high levels of wealth that can be utilised to extend consumption possibilities. For example, households with retired members may have low income levels but relatively high levels of wealth through the ownership of their home and other investments.

Wealth is an important household economic resource in three ways. Firstly, living costs can be financed for a limited time by running down cash reserves, borrowing against assets or selling assets outright. Secondly, wealth can generate income, such as rental income from an investment property or interest from savings. Finally, wealth may reduce household living costs; for example, those who own their own home outright will, on average, have lower housing costs than those paying a mortgage or rent.

Household sector

Householders' wealth holdings have been directly measured by ABS in 2003-04, 2005-06 and 2009-10. However, the ABS National Accounts data provide an extended time series on total household sector net worth, which includes the wealth of householders as well as the wealth of people in non-private dwellings and the wealth of non-profit institutions serving households, such as churches, sporting and social clubs (see glossary). Over the previous two decades there has been a sharp increase in total household sector net worth per capita, increasing from \$76,000 in 1988-89 to \$232,000 in 2008-09. However, between 2007-08 and 2008-09, total household net worth per capita displayed its first year-on-year decrease over the 20 year period, dropping from \$248,000 to \$232,000.

Household net worth

Household wealth is expressed by net worth, which is measured by the value of household assets minus the value of liabilities.

The 2003-04 and 2005-06 cycles of the ABS Survey of Income and Housing collected a range of detailed information on household assets and liabilities that allows a more detailed disaggregation of householders' net worth. In 2005-06, the mean value (in real dollars) of household assets was \$655,300 and the mean value of household liabilities was \$92,500, resulting in average household net worth of \$563,000. This was 14% higher than in 2003-04 (\$494,000).

However, in 2005-06 the median household net worth measured in the ABS Survey of Income and Housing, at \$340,000, was substantially lower than average household net worth. The difference between the mean and median values of net worth reflects the asymmetric distribution of wealth among households, where a relatively small proportion of households had high net worth and a relatively large number of households had low net worth. For example, in both 2003-04 and 2005-06 the 20% of households with the lowest wealth accounted for just 1% of total household net worth at an average of \$27,000. In comparison, the wealth of households in the highest net worth quintile accounted for 59% of total household net worth in 2003-04 and 61% in 2005-06, at an average of \$1.7 million per household (ABS 2007a).

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VALUE OF SELECTED HOUSEHOLD ASSETS AND LIABILITIES

In 2005-06, the value of owner occupied dwellings and the value of other property were the most significant household assets in Australia, representing 44% and 14% respectively of the total assets of households. Superannuation and the value of contents of the dwelling followed in importance with 13% and 8% respectively. This was also the pattern in 2003-04.

For further discussion on the value of assets and liabilities see Older people.

Mean value of selected household assets and liabilities of all households(a)

Assets and liabilities type	2003-04	2005-06
	\$'000	\$'000
ASSETS		
Financial assets		
Value of accounts held with financial institutions	22.3	24.8
Value of shares (excl. own incorporated business)	19.3	22.7
Value of trusts	9.7	10.0
Value of debentures and bonds	1.0	0.9
Value of own incorporated business (net of liabilities)	24.1	45.2
Total superannuation	67.1	84.5
Total financial assets(b)	144.3	193.0
Non-financial assets		
Property assets		
Value of owner occupied dwelling	263.2	286.1
Value of other property	74.8	90.7
Total property assets	338.1	376.7
Value of own unincorporated business (net of liabilities)	16.5	14.3
Value of contents of dwelling	50.1	50.9
Value of vehicles	18.2	19.4
Value of assets not elsewhere classified	0.6	*0.9
Total non-financial assets	423.4	462.3
Total assets	567.7	655.3
LIABILITIES		
Total property loans	63.3	79.1
Other liabilities		
Debt outstanding on study loans	1.3	1.5
Amount owing on credit cards	2.0	2.2
Principal outstanding on loans for vehicle purchases (excl. business loans)	2.8	2.8
Principal outstanding on investment loans (excl. business and rental property loans)	2.5	5.1
Principal outstanding on loans for other purposes (excl. business and investment loans)	1.5	1.7
Total liabilities	73.4	92.5
NET WORTH OF HOUSEHOLDS	494.3	562.9

* estimate has a relative standard error of between 25% to 50% and should be used with caution

(a) Based on 2005-06 dollars, adjusted using changes in the Consumer Price Index.

(b) Includes values of other financial investments, children's assets and loans to persons not in the same household.

Source: ABS Household Wealth and Wealth Distribution, 2005-06 (cat. no. 6554.0)

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HOUSEHOLD SECTOR CONSUMPTION

Income and wealth are both used to fund the consumption of household goods and services. Household consumption relates to household economic wellbeing in that it measures the acquisition of goods and services used for the direct satisfaction of individual or collective wants and needs. Household sector consumption is measured by real household sector final consumption expenditure (FCE) per capita.

Over the decade 1999-2009, real household sector FCE per capita grew by an average of 1.9% per year.

Expenditure (as measured by real household FCE) on communication showed particularly strong growth, with an average of 4.3% per year. This partly reflects the increasing availability and use of both mobile phones and the Internet. Expenditure on furnishing and household equipment, and health, also grew strongly with average annual growth of 4.0% and 3.1% respectively. Recreation and culture was another area which saw strong growth, with an average annual growth rate of 3.1% over the period. However, this category includes significant expenditures by non-profit institutions such as churches and social and sporting clubs.

The share of real household sector FCE on items that could be considered essentials for daily life (food, clothing, housing and utilities) fell over the same decade, from 36% to 34%. The only decrease in average expenditure per capita was on alcoholic beverages and tobacco, falling at an average rate of 0.3% per year.

Household sector real final consumption expenditure(a) per capita

	1999 \$	2009 \$	Annual average growth rate %
Food	2 914	3 223	0.9
Alcoholic beverages and tobacco	1 101	1 066	-0.3
Clothing and footwear	836	1 038	2.0
Rent and other dwelling services	4 443	5 263	1.6
Electricity, gas and other fuel	523	610	1.4
Furnishings and household equipment	1 013	1 557	4.0
Health	1 149	1 611	3.1
Transport	3 129	3 381	0.7
Communication	533	849	4.3
Recreation and culture	2 430	3 398	3.1
Education services	811	1 004	2.0
Hotels, cafes and restaurants	1 808	2 038	1.1
Miscellaneous goods and services	3 871	4 973	2.3
Total	24 451	30 011	1.9

(a) Chain volume measure: reference year 2007-08.

Source: ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0); ABS Australian Demographic Statistics, June 2009 (cat. no. 3101.0)

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PROGRESS OF AUSTRALIANS

Household economic wellbeing (particularly in relation to measures of income and wealth) may be influenced by a range of socioeconomic factors. For example, a person's inability to work, differences in consumption and investment behaviours, variation in family and life circumstances, and the capacity of individuals to manage all these factors will all impact on the household's economic wellbeing.

There are several population groups that appear to be more likely to have low household economic wellbeing than the population as a whole. Examples of groups at risk include one parent families, older Australians, income support recipients and Aboriginal and Torres Strait Islander peoples.

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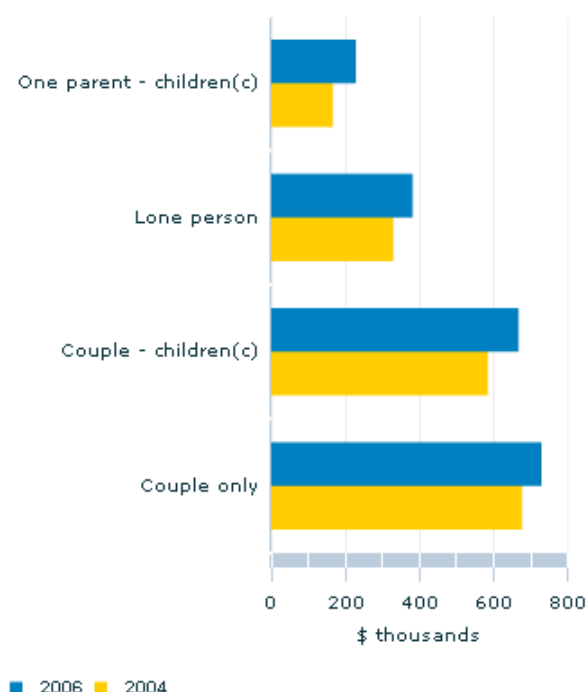
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Household economic wellbeing

Mean household net worth - life cycle group(a)(b)



Footnote(s): (a) As at 30 June. (b) Based on 2005-06 dollars, adjusted using changes in the Consumer Price Index. (c) Dependent children.

Source(s): ABS Household Wealth and Wealth Distribution, 2005-06 (cat. no. 6554.0)

ONE PARENT FAMILIES

One parent families are considered to be at higher risk of economic disadvantage compared with several other family types. For example, in 2007-08, one parent families with dependent children had a mean equivalised disposable household income of \$520 per week, and only 8% fully owned their home. Therefore a substantial proportion were making mortgage or rental payments from their gross incomes (ABS 2009a). Furthermore, almost half (44%) of one parent families with dependent children had no employed resident parent (ABS 2009b).

In 2007-08, one parent families with dependent children were almost twice as likely to be in the low income group as were couple families with dependent children (34% compared with 19%). Almost half (45%) of one parent families with dependent children received government pensions and allowances as their principal source of income. This was also the pattern in 2003-04.

The distribution of net worth also varied across household types. In 2005-06, one parent households with dependent children had a substantially lower mean household net worth than couple households with dependent children (\$229,000 compared with \$670,000).

Indicators of economic situation by household composition

2003-04

2007-08

Family composition of household	All persons in households	In low income group	All persons in households	In low income group
	'000	%	'000	%
One family households				
Couple family with dependent children	8 667.0	16.6	8 862.4	19.4
One parent family with dependent children	1 529.4	38.4	1 504.7	33.8
Couple only, reference person aged				
15-44	1 122.7	3.9	1 180.4	*3.4
45-64	1 597.6	19.6	1 668.5	16.1
65 and over	1 313.4	52.4	1 434.3	48.7
Other one family households	2 391.7	12.2	2 791.2	12.4
Multiple family households	420.5	*18.3	583.8	*20.3
Non-family households				
Lone person aged				
15-24	76.5	*9.3	107.4	*9.2
25-44	553.7	7.1	499.9	5.4
45-64	614.9	13.4	659.4	13.6
65 and over	717.0	35.9	737.4	30.4
Group households	602.3	16.2	613.9	11.2
Total	19 606.6	20.0	20 643.1	19.9

* estimate has a relative standard error of between 25% to 50% and should be used with caution

Source: ABS Household Income and Income Distribution, Australia, 2007-08 (cat. no. 6523.0)

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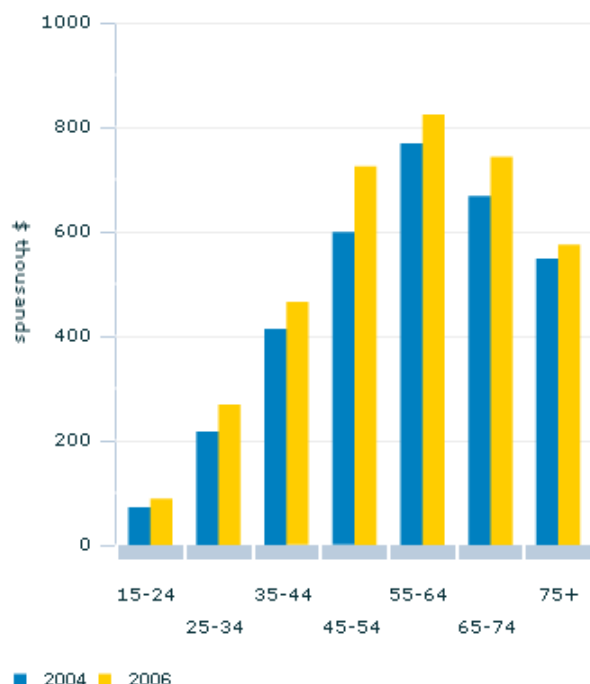
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Mean household net worth(a)(b) by age(c)



Footnote(s): (a) As at 30 June. (b) Based on 2005-06 dollars, adjusted using changes in the Consumer Price Index. (c) Age of household reference person.

Source(s): ABS Household Wealth and Wealth Distribution, 2005-06 (cat. no. 6554.0)

OLDER PEOPLE

The distribution of wealth among households is closely associated with age. In 2005-06, average household net worth peaked in the 55-64 year age group at around \$824,000 and then decreased for those aged 65-74 years (\$743,000) and 75 years and over (\$575,000). This partly reflects the common pattern of people gradually accumulating wealth throughout their working life and drawing upon this wealth in retirement. While nearly three-fifths (59%) of people aged 55-64 were employed, this declined for those aged 65-74 years (17%) and those aged 75 years and over (5%). While mean household net worth was generally lower in 2003-04, the pattern of distribution across the age groups was the same.

The age of household members is also reflected in the composition of household wealth. In 2005-06, the average value of shares and trusts in older households (where the reference person was aged 65 years and over) was higher than in younger households (\$39,000 and \$12,000 compared with \$7,000 and \$3,000). Older households had less wealth in their superannuation funds and more in the values of their accounts held in financial institutions. The latter may reflect retirees receiving a lump sum payment from their superannuation funds and depositing it in financial institutions. Total liabilities tended to be lower in older households as they are more likely to have paid off most debts, especially those relating to mortgages.

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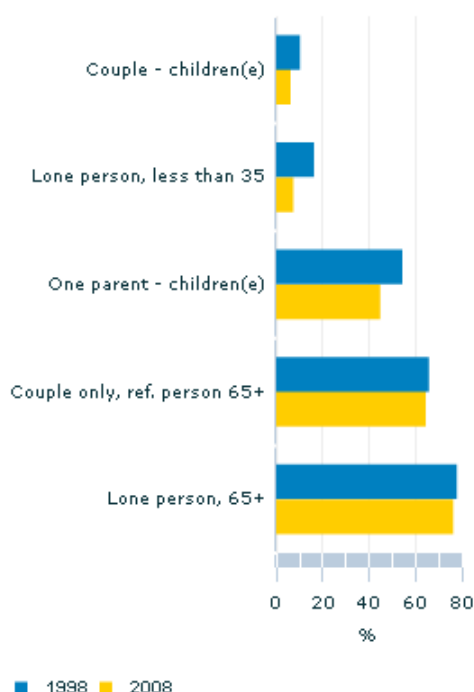
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Household economic wellbeing

Government pensions as main source of income(a)(b)(c)(d)



Footnote(s): (a) Year ending 30 June. (b) Includes allowances. (c) As a proportion of selected life cycle group. (d) For Couple only where the reference person was aged less than 35 years, see the Household economic wellbeing datacube. (e) Dependent children.

Source(s): ABS data available on request, Surveys of Income and Housing

INCOME SUPPORT RECIPIENTS

One group of Australians who are more likely to experience low household economic wellbeing are those whose main source of income is government benefits. To be eligible to receive most government benefits, recipients must generally have low levels of both wealth (excluding the family home) and income. In 2007-08, over half (55%) of low income households received government pensions and allowances as their principal source of income.

The proportion of households whose main source of income was government pensions and allowances has generally declined over the decade 1997-98 to 2007-08. Over this period, lone person households, where the reference person was aged 65 years and over, were the most likely to receive government pensions and allowances as their main source of income (78% in 1997-98 and 76% in 2007-08). In 2007-08, 45% of one parent families with dependent children received government benefits as their main source of income, decreasing from 54% in 1997-98. Factors contributing to the general decline over this decade in government pensions and allowances as householders' main source of income may include: strong jobs growth, the closure or phasing out of some payments, and tightening of eligibility criteria to receive some payments (ABS 2010a).

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ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLES

Aboriginal and Torres Strait Islander peoples experience a range of relative disadvantages, including low household economic wellbeing. Lower levels of employment and educational attainment relative to non-Indigenous Australians contribute to lower economic resources.

In 2004-05, the average real equivalised gross weekly household income for Aboriginal and Torres Strait Islander people (aged 18 years and over) was \$508 per week compared with \$830 for non-Indigenous people. Between 2004-05 and 2008, average real equivalised gross weekly household income for Aboriginal and Torres Strait Islander people rose by 14% (to \$580 per week). However, the gap between Aboriginal and Torres Strait Islander and non-Indigenous weekly income still remained the same. Overall, in 2004-05 and 2008, average real equivalised gross weekly household income for Aboriginal and Torres Strait Islander people was around 61% of the corresponding figure for non-Indigenous people. (See the glossary for further information on how the average real equivalised gross weekly household income for Aboriginal and Torres Strait Islander people was measured).

Indicators of financial stress can also help to provide insight into the household economic wellbeing of people. In 2008, just under half (47%) of Aboriginal and Torres Strait Islander people aged 15 years and over lived in a household where the household would be unable to raise \$2000 within a week in an emergency, decreasing from 54% in 2002 (ABS 2009c).

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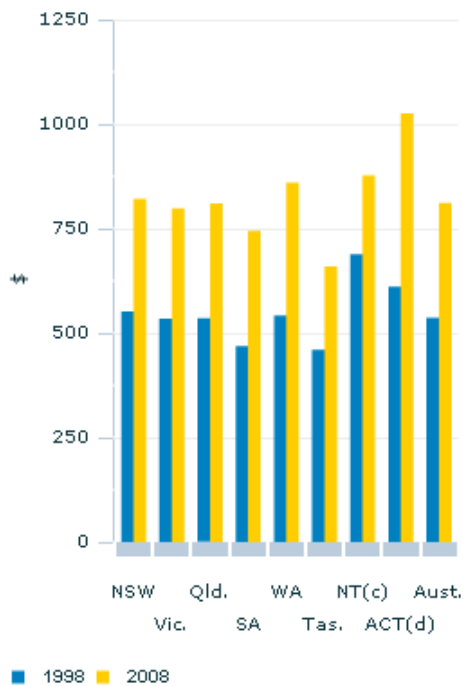
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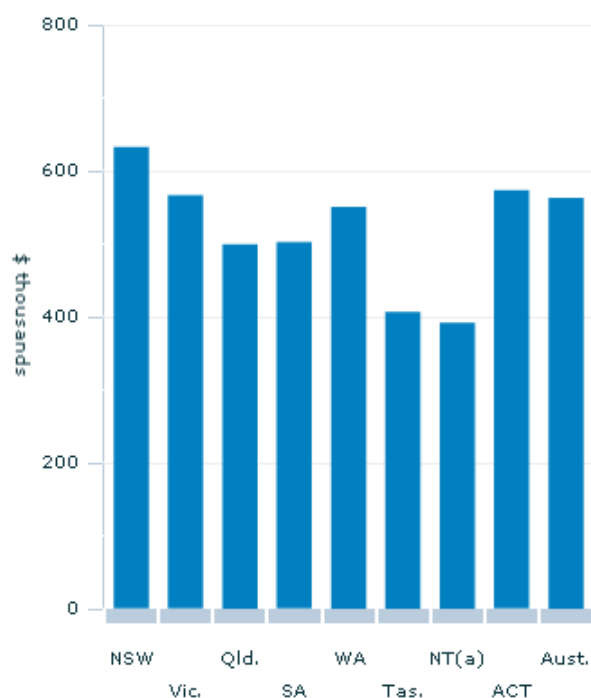
Average real equivalised disposable household weekly income(a)(b)



Footnote(s): (a) Year ending 30 June.
(b) Based on 2007-08 dollars, adjusted using changes in the Consumer Price Index. (c) Households in collection districts defined as very remote were excluded, accounting for about 23% of the population in the Northern Territory.
(d) As the balance of state is not available for the ACT, estimates for the ACT are the same as those for Canberra.

Source(s): ABS Household Income and Income Distribution, Australia, 2007-08 (cat. no. 6523.0)

Mean net worth of households - 2005-06



Footnote(s): (a) Households in collection districts defined as very remote were excluded, accounting for about 23% of the population in the Northern Territory.

Source(s): ABS Household Wealth and Wealth Distribution, 2005-06 (cat. no. 6554.0)

STATES AND TERRITORIES

In 2007-08, there were differences in the average levels of household income between the states and territories. Tasmania's average real equivalised disposable household weekly income was 19% below the national average of \$811 per week and South Australia's was 8% below. The Australian Capital Territory (ACT), the Northern Territory (NT) and Western Australia (WA) all recorded the highest average household incomes. This most likely reflects the younger age profile of the ACT and the NT and the greater number of employed people per household. The results for the NT also reflects the exclusion of households in 'very remote' areas, which, if included, would be likely to reduce the average income (ABS 2009a). This was also the pattern a decade earlier in 1997-98, however New South Wales (NSW) had a higher average household income compared with WA.

Overall, average household income increased for all the states and territories between 1997-98 and 2007-08 (Endnote 1). The states and territories experiencing the direct effects of the mining boom (WA, Qld and NT) have all shown strong income growth.

There was also some variation in average household wealth between the states and territories. In 2005-06, the average net worth of households ranged from around \$632,000 in NSW to \$392,000 in the NT (compared with an Australian average of \$563,000).

ENDNOTES

1. Estimates presented for 2007-08 are not directly comparable with estimates for previous cycles due to improvements made to measuring income introduced in the 2007-08 cycle. Estimates for 2003-04 and 2005-06 have been recompiled to reflect the new measures of income, however not all components introduced are available to present the years on a comparable basis. See Appendix 4 of ABS Household Income and Income Distribution, Australia, 2007-08 (cat. no. 6523.0) for further information. ([link](#))

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LINKS TO OTHER DIMENSIONS OF PROGRESS

Household economic wellbeing is closely associated with a number of other dimensions of progress.

The national economy is an important determinant of the overall living standards of Australian society. For example, a strong economy presents more opportunities for households and individuals and may improve the capacity to provide support to those in the greatest need. Alternatively, if policy addresses inefficiencies which may drive relative disadvantage, overall growth can be expected to rise more quickly.

Low levels of household economic wellbeing may be associated with issues such as unemployment, poor health, low levels of education and social exclusion.

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HOUSEHOLD ECONOMIC WELLBEING GLOSSARY

Aboriginal and Torres Strait Islander average real equivalised disposable household weekly income

Refers to people aged 18 years and over. Data for the Aboriginal and Torres Strait Islander population is derived from the 2004-05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) and the 2008 National Aboriginal and Torres Strait Islander Social Survey (NATSISS). Corresponding figures for the non-Indigenous population are derived from the 2004-05 and 2007-08 National Health Survey (NHS).

The mean weekly equivalised gross household income estimates from the 2004-05 NHS, 2004-05 NATSIHS and 2007-08 NHS have been adjusted for inflation to account for enumeration period differences with 2008 NATSISS. Original CPI indexes (Australia) were used to adjust for inflation. Estimates of household income have been produced based on known income only. Approximately 19% of households had a not stated or not known income in the 2008 NATSISS.

Assets

Assets are entities functioning as stores of value and over which ownership rights are enforced by institutional units, individually or collectively, and from which economic benefits may be derived by their owners by holding them, or using them, over a period of time (the economic benefits consist of primary incomes derived from the use of the asset, and the value, including possible holding gains/losses, that could be realised by disposing of the asset or terminating it).

Deciles

Groupings that result from ranking all households or persons in the population in ascending order according to some characteristic such as their household income and then dividing the population into 10 equal groups, each comprising 10% of the estimated population.

Disposable income

Gross income less income tax and the Medicare levy, i.e. remaining income after direct taxes are deducted, which is available to support consumption and/or saving. Income tax and the Medicare levy are imputed based on each person's income and other characteristics as reported in the survey. Disposable income is sometimes referred to as net income.

Equivalised income

Measures of household income (including the headline indicator) and wealth are adjusted or equivalised to take account of differing household size and composition. The equivalised measure factors in the sharing of income between household members and takes into account the economies of scale that arise from the sharing of dwellings, whilst also recognising that larger households need greater income levels to maintain the same standard of living as smaller households. The equivalence factor used gives a weighting of 1.0 to the first (or only) adult, a weight of 0.5 for each additional adult, and a weight of 0.3 for each child aged under 15. The equivalised income or wealth of lone person households is the same as the unequivalised value. For households comprising multiple people, the equivalised value is less than the total unequivalised value but greater than the per person share of the unequivalised value.

Final consumption expenditure

The acquisition of goods and services used for the direct satisfaction of individual or collective wants.

Financial assets

An asset whose value arises not from its physical existence (as would a building, piece of land, or capital

equipment) but from a contractual relationship. Financial assets are mostly financial claims (with the exception of shares). Financial claims entitle the owner, via a contractual relationship, to receive a payment, or a series of payments, from an institutional unit. Examples include accounts held with financial institutions, ownership of an incorporated or unincorporated business, shares, debentures and bonds, trusts, superannuation funds, and loans to other persons.

Government pensions and allowances

Income payments from government to persons under social security and related government programs. Included are pensions and allowances received by aged, disabled, unemployed and sick persons, families and children, veterans or their survivors, and study allowances for students. All overseas pensions and benefits are included here, although some may not be paid by overseas governments. The one-off payment to seniors paid in 2000–01, the one-off payment to families paid in 2003–04 and the one-off payments to carers paid in 2003–04, 2004–05 and 2005–06 are included. Family tax benefit is also regarded as income. However, prior to 2005–06, family tax benefit paid through the tax system or as a lump sum by Centrelink was only included in disposable income, and not gross income.

High income group

Refers to the 20% of people in the 9th and 10th deciles after being ranked from lowest to highest, by their equivalised disposable household income.

Household

A person living alone or a group of related or unrelated people who usually live in the same private dwelling.

Household income

The aggregate of the incomes of all members of a household.

Household net worth or wealth

At any point in time is the difference between the value of the assets and liabilities of households or of the household sector.

Households sector

An institutional sector comprising resident households, including resident household unincorporated enterprises and non-profit institutions, such as churches and sporting and social clubs, serving households.

Income

Income consists of all current receipts, whether monetary or in kind, that are received by the household or by individual members of the household, and which are available for, or intended to support, current consumption.

Income includes receipts from:

- wages and salaries and other receipts from employment (whether from an employer or own incorporated enterprise), including income provided as part of salary sacrificed and/or salary package arrangements
- profit/loss from own unincorporated business (including partnerships)
- net investment income (interest, rent, dividends, royalties)
- government pensions and allowances
- private transfers (e.g. superannuation, workers' compensation, income from annuities, child support, and financial support received from family members not living in the same household).

Gross income is the sum of the income from all these sources before income tax, the Medicare levy and the Medicare levy surcharge are deducted. Other measures of income are Disposable income and

Equivalised disposable income. Final income takes account of goods and services provided by governments to households either free of charge or at a subsidised rate, and deducts indirect taxes, such as GST.

Note that child support and other transfers from other households are not deducted from the incomes of the households making the transfers.

Indigenous

Refers to people who identified themselves, or were identified by another household member, as being of Aboriginal and/or Torres Strait Islander origin.

Liability

A liability is a contractual obligation which requires one unit (the debtor) to make a payment or a series of payments to the other unit (the creditor) in certain circumstances specified in a contract between them.

Low income group

Refers to the 20% of people in the second and third lowest income deciles after being ranked from lowest to highest, by their equivalised disposable household income.

Middle income group

Refers to the 20% of people in the fifth and sixth income deciles after being ranked from lowest to highest, by their equivalised disposable household income.

Principal source of household income

Refers to the source from which the most income is received. As households can have several sources of income, the principal source may account for less than 50% of total income.

Reference person

The reference person for each household is chosen by applying, to all household members aged 15 years and over, the selection criteria below, in the order listed, until a single appropriate reference person is identified:

- one of the partners in a registered or de facto marriage, with dependent children
- one of the partners in a registered or de facto marriage, without dependent children
- a lone parent with dependent children
- the person with the highest income
- the eldest person.

For example, in a household containing a lone parent with a non-dependent child, the one with the higher income will become the reference person. However, if both individuals have the same income, the elder will become the reference person.

Quintiles

Groupings that result from ranking all households or persons in the population in ascending order according to some characteristic such as their household income and then dividing the population into five equal groups, each comprising 20% of the estimated population.

Real (income)

It is possible to deflate measures of income and wealth by a price index in order to measure changes that abstract from the price effects captured in the index. Aggregates deflated in this way are generally described as "real". Real income or wealth is measured with reference to the price level in some selected reference year. Thus real values cannot exist in isolation, rather they vary depending upon the choice of

reference year.

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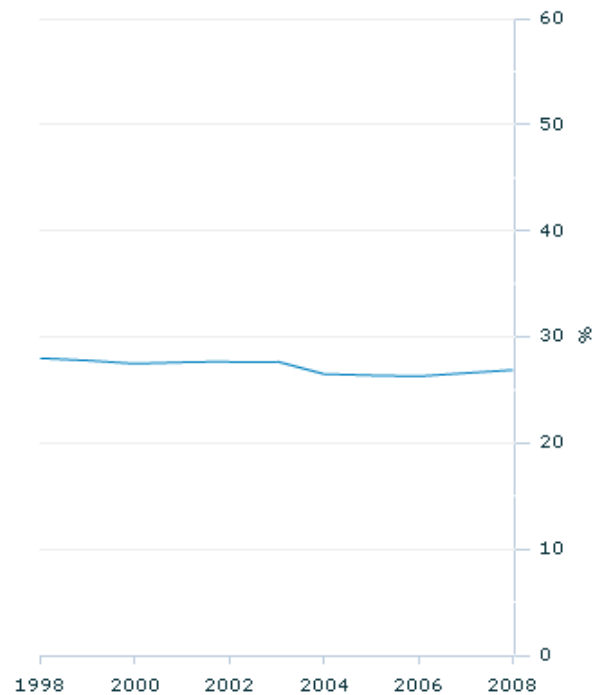
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Housing



Low income rental affordability

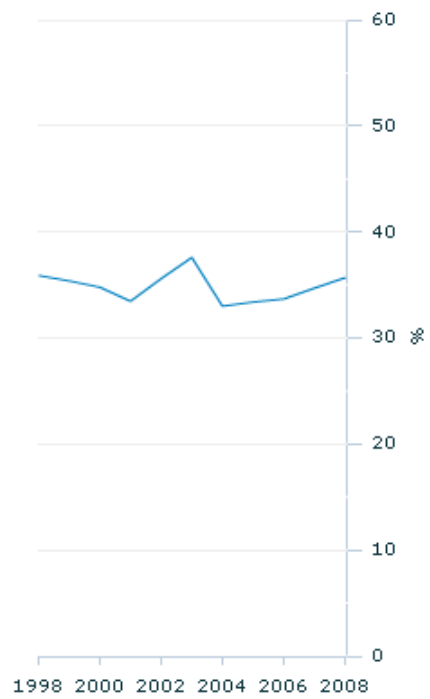
Rental affordability for low income households (that is the proportion of housing costs to gross income for low income renters) has remained constant over the past 10 years (28% in 1997-98 and 27% in 2007-08).

(a) Year ending 30 June. Data unavailable for years 1999, 2002, 2005, and 2007 and have been interpolated. (b) See Housing glossary for definitions.

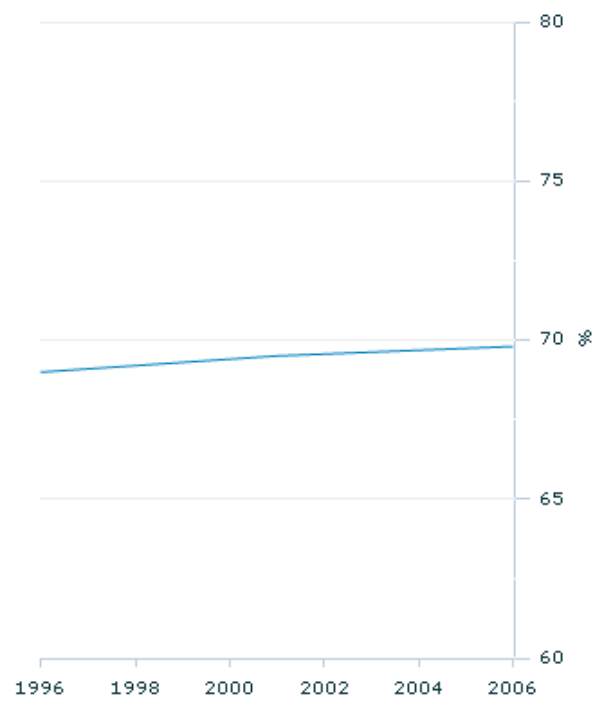
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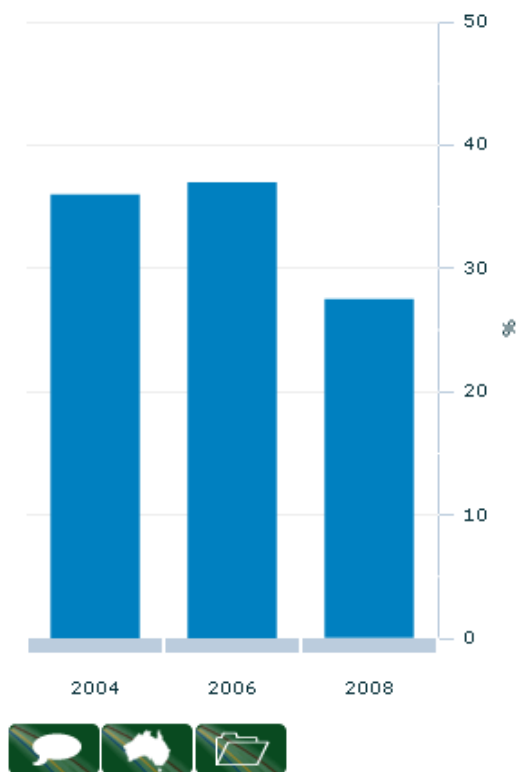
 Source Data



Home ownership rate



Affordable home purchases



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HOUSING AND PROGRESS

Housing provides people with shelter, security, and privacy. Having an adequate and appropriate place to live is fundamental to people's wellbeing. Improvements to the overall accessibility of appropriate housing for Australians is important in determining whether life in Australia is getting better.

Most Australian households are able to exercise a significant degree of housing choice when making their consumption, savings, and investment decisions. But some Australian households face problems in accessing suitable housing, for a number of reasons such as discrimination, availability, location or cost. For some Australians renting is a personal preference. But for many low income households, renting is often the only affordable option, and suitable rental dwellings can become less accessible when rents rise faster than incomes. Moreover, as housing costs are often the largest regular expense to be met out of a household's income, rising housing costs can influence the amount of income households have available to meet other needs.

A primary focus, then, for an indicator with which to measure housing progress is one that focuses on that part of the population who have very limited housing choice. For people living in low income households, housing affordability is primarily related to the access of shelter. This is in contrast to people who live in higher income households, for whom greater income facilitates a wider range of housing choices, including purchase. An indicator that tells us about how well those with limited economic resources can access shelter is therefore important when assessing whether housing in Australia is getting better.

The headline indicator chosen for housing access - low income rental affordability - is the proportion of housing costs to household income for low income renters (both private and public renters) in Australia. A rise in this indicator reflects increasing difficulty for those with limited choice to both access suitable shelter and meet other costs of living. Conversely, a fall in the indicator reflects less financial pressure on low income households to meet their 'after housing costs' budget.

Measures of the levels of rental stress, home ownership, and housing affordability for home buyers are included as supplementary indicators of the overall state of housing in Australia. Information on house prices and levels of housing investment, and housing issues for specific population groups, is also provided.

Homelessness is not discussed in this section. Homelessness is more often influenced by social factors associated with mental illness, long-term unemployment, family and relationship breakdowns, etc, rather than with aspects of housing per se. Homelessness is discussed in the Family, community and social cohesion section.

For a full list of definitions, please see the Housing glossary.

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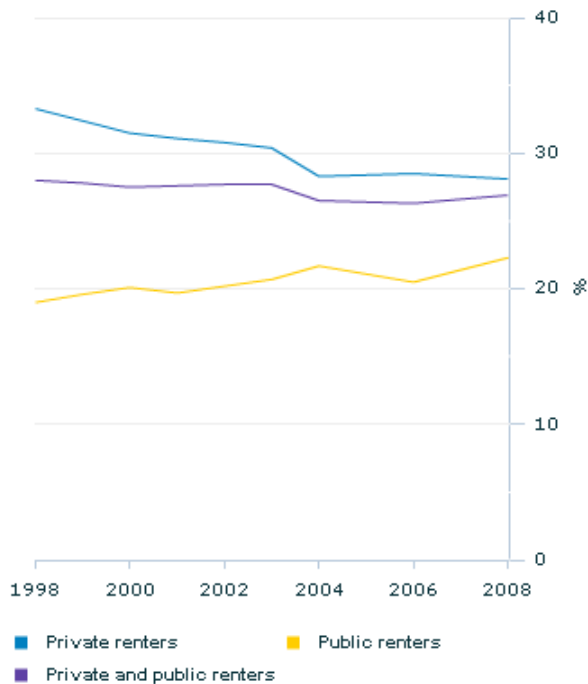
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Housing

Low income rental affordability(a)(b)



Footnote(s): (a) Year ending 30 June. Data unavailable for years 1999, 2002, 2005, and 2007 and have been interpolated. (b) See Housing glossary for definitions of 'Low income renters' and 'Low income rental affordability'.

Source(s): ABS data available on request, Survey of Income and Housing

LOW INCOME RENTAL AFFORDABILITY

Access to appropriate and affordable rental accommodation is a fundamental requirement for those who, due to their limited economic resources, have no option but to rent. The ability to access such housing is reflected in the headline progress indicator: low income rental affordability, which is the proportion of housing costs to gross household income for low income renters (both private and public renters). Where this proportion is increasing, it indicates that households are required to spend more of their available income on housing, at the expense of other household costs or savings, and may be expected to result in a decline in overall living standards. In contrast, if the proportion declines, then households will have less financial pressure in meeting their various non-housing costs of living, or saving requirements.

Overall, rental affordability for low income households remained constant over the 10 years to 2007-08 (28% in 1997-98 and 27% in 2007-08). However, there were differences between private renters and public renters. For low income *private* renter households, housing costs increased by 34%, and gross income rose by 64%, from 1997-98 to 2007-08. As a result, the proportion of housing costs to gross income for private renters declined from 33% in 1997-98 to 28% in 2007-08.

Over the same period, for low income *public* renter households, housing costs increased by 30% and gross income by 11%. This resulted in the proportion of housing costs to gross income for public renters increasing from 19% to 22%.

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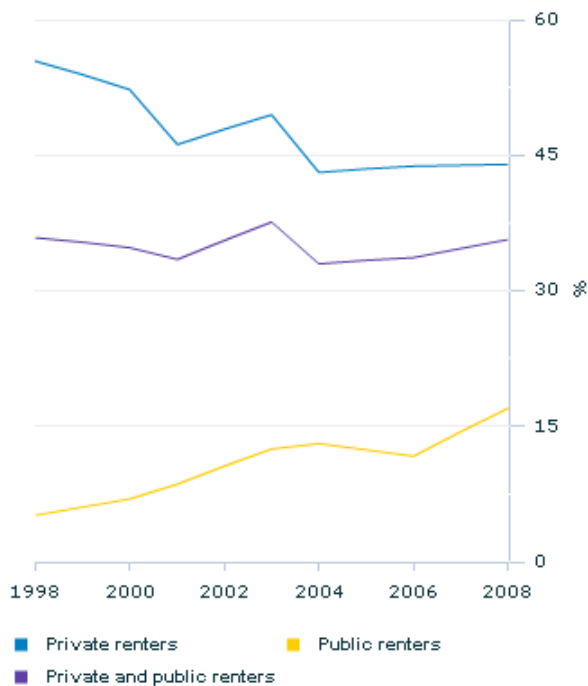
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Low income renters in rental stress(a)(b)



Footnote(s): (a) Year ending 30 June. Data unavailable for years 1999, 2002, 2005, and 2007 and have been interpolated. (b) See Housing glossary for definitions.

Source(s): ABS data available on request, Survey of Income and Housing

RENTAL STRESS

'Rental stress' is a term often used to describe households at risk of experiencing difficulty meeting their rental costs. High levels of rental stress mean that affordability may be low and, as a result, those households experiencing rental stress may be less able to rent housing that meets their basic needs.

Low income households in rental stress are more likely to be renting basic shelter. In contrast, higher income households have the economic resources available to allow them to choose to consume a wider range of housing services. The indicator on rental stress therefore relates solely to low income households.

The proportion of low income renter households in rental stress has remained fairly constant over the past 10 years (36% in both 1997-98 and 2007-08). The proportion of low income private renter households in rental stress declined from 55% in 1997-98 to 44% in 2007-08. Over the same period the proportion of low income public renter households in rental stress increased from 5% to 17%.

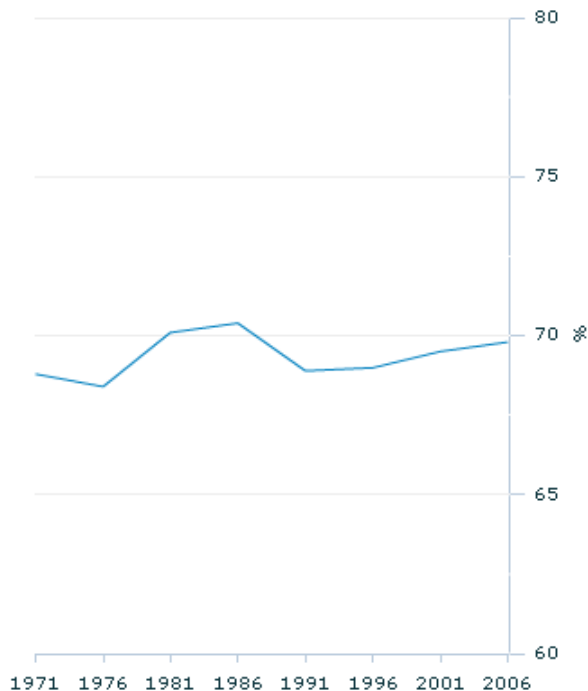
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Housing

Home ownership rate(a)



Footnote(s): (a) Proportion of owner occupied private dwellings.

Source(s): ABS data available on request, Census of Population and Housing

LEVELS OF HOME OWNERSHIP

Home ownership is a widely held aspiration in Australia, providing security of tenure and long term economic benefits to home owners. Owning a home can also bring social and cultural benefits such as a sense of belonging. For some home owners, the dwelling and the land on which it stands is a major asset, and for many it is their main asset.

Home ownership rates have been fairly stable at around 70% for many decades. As measured in the ABS Census of Population and Housing, in 1971 the home ownership rate was 69% and in 2006 it was 70%, with small fluctuations around 70% in the intervening Censuses.

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Housing

Affordable home purchases(a)(b)

Affordable home purchases(a)(b)



Footnote(s): (a) Affordable by moderate income households. (b) See 'affordable homes (for home buyers)' in the Housing glossary for definitions.

Source(s): ABS data available on request, Survey of Income and Housing; Valuers General data

Footnote(s): (a) Affordable by moderate income households. (b) See 'affordable homes (for home buyers)' in the Housing glossary for definitions.

Source(s): ABS data available on request, Survey of Income and Housing; Valuers General data

HOUSING AFFORDABILITY FOR HOME BUYERS

The home ownership aspiration of Australians has widely been referred to as 'the great Australian dream'. For higher income households, purchase affordability is an issue of choice rather than access. For those with more modest means, affordability is a more significant issue. For this indicator of home purchase affordability, a home is considered affordable if a household would have to spend no more than 30 per cent of its gross income on mortgage repayments.

The proportion of homes sold that were affordable to moderate income households declined from 36% in 2003-04 to 27% in 2007-08.

The number of homes sold that were affordable by moderate income households declined from 24 homes

per 1,000 moderate income households in 2003-04 to 17 homes per 1,000 households in 2007-08. The proportion of homes sold that were affordable to low income households declined from 15% in 2003-04 to 7% in 2007-08.

The affordability of homes for home buyers is influenced by many factors including interest rates, the price of homes, and the level of household income. From July 2003 to June 2008 the standard variable interest rate for housing loans increased from 6.55% to 9.45%. From 2003-04 to 2005-06 the price of homes increased at a generally commensurate pace with income growth. However, between 2005-06 and 2007-08 prices rose more strongly, contributing to the decline in purchase affordability from 2005-06 to 2007-08.

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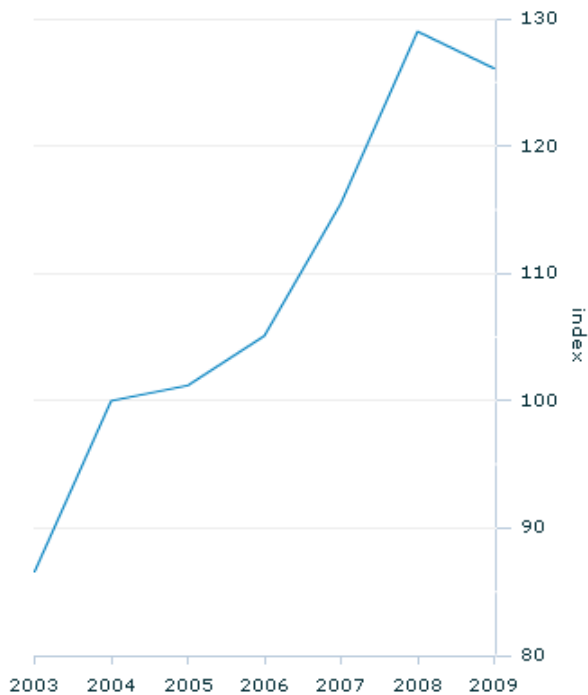
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Housing

House price index(a)(b)



Footnote(s): (a) HPI for established houses, weighted average for eight capital cities. (b) Annual average for year ending 30 June. Base year of index is 2003-04 = 100.

Source(s): [ABS House Price Indexes: Eight Capital Cities, March 2010 \(cat. no. 6416.0\)](#)

HOUSE PRICES

House prices are linked to all aspects of housing and the housing market. House prices influence: whether people can afford to purchase homes, the rental costs tenants pay, and other business and market activities in the housing sector. Upwards movements in house prices impact upon individuals who already own a home through increasing the value of what is often their most significant economic investment.

The price of established houses in the capital cities rose by almost half (46%) between 2002-03 and 2008-09, with prices increasing at an average of 6.5% per year. Over this period, prices generally rose from quarter to quarter with the exception of fluctuations in 2004 and 2005, and four quarters of decline beginning in the June quarter of 2008. The recent decline in house prices was, in part, due to a wider slowdown in the economy as a result of the global financial crisis.

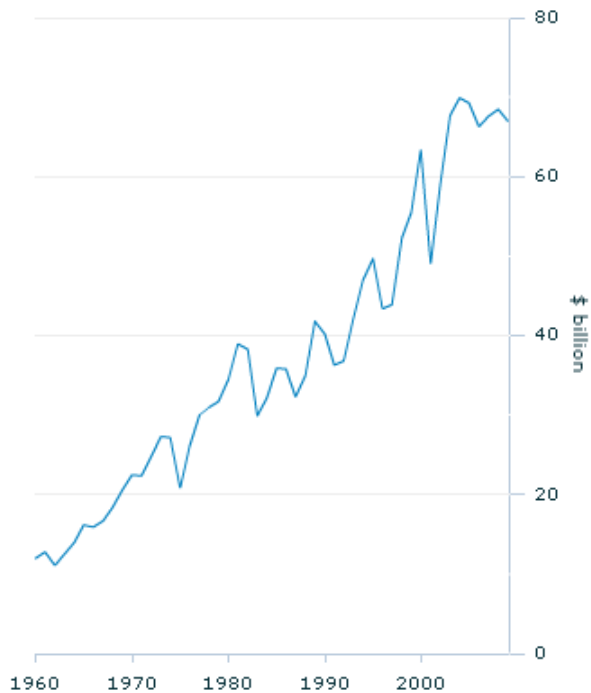
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Housing

Private investment in dwellings(a)



Footnote(s): (a) Values are in 2007-08 prices. Year ending 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0)

INVESTMENT IN DWELLINGS

Australians continue to hold significant investments in land and housing. In the 10 years to June 2009, around \$648 billion (in 2007-08 prices) in real terms was invested in Australian dwellings (excluding land), an increase from \$447 billion in the 10 years up to 1999.

Land and houses remain by far the most significant private asset owned by the majority of Australians, representing 57% of the total value of all assets owned by the household sector at 30 June 2009.

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Housing

PROGRESS OF AUSTRALIANS

Not all population groups in Australia experience the same housing circumstances. A significant aspect of social policy is to identify and meet the housing requirements of specific Australian population groups to address the key issue of shelter. A key focus of policy is to ensure that the role of inadequate housing, as a potential risk factor for poor health and other adverse social outcomes, is diminished.

This section discusses housing circumstances across the states and territories, and looks at population groups within Australia who face the challenges of inadequate or relatively high cost housing, including Aboriginal and Torres Strait Islander Australians, and one parent households.

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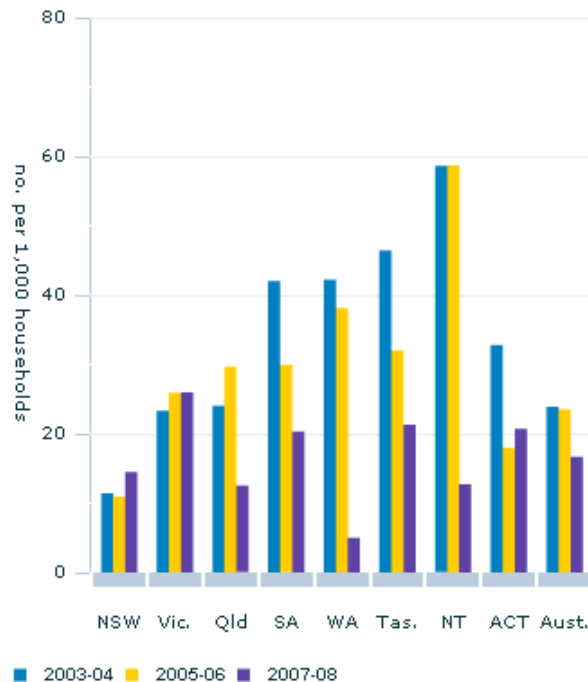
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Housing

Affordable home purchases(a)(b)



Footnote(s): (a) NT estimates do not include balance of state areas since estimates for NT other than Darwin are not considered reliable. (b) See Housing glossary for definitions.

Source(s): ABS data available on request, Survey of Income and Housing; Valuers General data

STATES AND TERRITORIES

Housing affordability and housing markets differ between cities and states. Some areas experience high population growth and housing shortages that place upward pressure on house prices, decreasing the availability of affordable homes for the less well off.

Between 2002-03 and 2008-09, the price of established houses in Perth and Darwin rose considerably more than in other capital cities, rising by an average of almost 14% per year. House prices in Hobart, Brisbane, and Adelaide also rose substantially, growing annually at an average of 10% or more. House prices in Canberra and Melbourne rose at an average of 6.9% and 7.5% per year during this time. The price of houses in Sydney fluctuated, but on average rose the least during the period, increasing annually on average at 1.6%.

From 2003-04 to 2007-08, there was a decline in the number of affordable home sales in all states except New South Wales and Victoria. The gross income for moderate income households in New South Wales and Victoria increased at a greater rate than the price of homes in these states during this period.

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Housing

ABORIGINAL AND TORRES STRAIT ISLANDER HOUSING

Although the physical conditions and amenities of most Australian dwellings are generally good, the condition of housing occupied by Aboriginal and Torres Strait Islander peoples, especially those in rural and remote areas, tends to be lower than that enjoyed by most other Australians. Aboriginal and Torres Strait Islander people are more likely to experience sub-standard housing facilities or overcrowded dwellings, issues that are of particular concern due to their association with poor outcomes in health, education, and child safety.

Standard of housing

In 2002, almost four in ten (38%) Aboriginal and Torres Strait Islander people aged 15 years or over lived in houses with major structural problems. By 2008, this had fallen to 28%, although for Indigenous people living in remote areas, the rate was higher (39%). Structural problems include major cracks in walls or floors, major plumbing problems, and wood rot or termite damage.

Poorer housing conditions, particularly in remote areas, are often related to higher maintenance requirements associated with harsher environmental conditions, higher building and maintenance costs due to access and distance related issues, and the pressure on housing facilities associated with overcrowding.

In 2008, 83% of Aboriginal and Torres Strait Islander households were living in houses of an acceptable standard. An acceptable standard is defined as a dwelling with four working facilities (for washing people, for washing clothes/bedding, for storing/preparing food, and sewerage) and with not more than two major structural problems. However, for Aboriginal and Torres Strait Islander people living in non-capital city areas of the Northern Territory, just under two thirds (65%) lived in housing of an acceptable standard.

Overcrowding

Overcrowding is an issue of social concern as it can place stress on the inhabitants by reducing privacy and opportunities for study or other private activities. Furthermore, it can place stress on bathroom, kitchen and laundry facilities as well as on sewerage systems (Howden-Chapman & Wilson, 2000). Overcrowding has been associated with poorer self-reported physical and mental health, and higher rates of smoking and hazardous drinking (Waters, 2001; Shaw, 2004).

In 2008, one-quarter (25%) of Aboriginal and Torres Strait Islander people aged 15 years and over lived in a dwelling where one or more additional bedrooms was required to appropriately house the inhabitants. Moreover, almost one in two Aboriginal and Torres Strait Islander people living in remote areas lived in overcrowded dwellings (48%).

Almost one-third of Aboriginal and Torres Strait Islander children aged 14 years or younger lived in overcrowded dwellings (31% of children 0-3 years and 32% of children 4-14 years) (ABS 2009c).

Tenure Type

Compared with the non-Indigenous population, Aboriginal and Torres Strait Islander people are much less likely to live in a dwelling owned by a resident of the dwelling (whether owned outright or with a mortgage). In 2008, 29% of Aboriginal and Torres Strait Islander people aged 15 years and over lived in a home owned by one or more of its residents compared with 72% of non-Indigenous people.

Just 10% of Aboriginal and Torres Strait Islander people aged 15 years and over living in remote areas lived in a dwelling that was owned by a resident, compared to 38% of those living in the major cities (ABS 2009c). Lower levels of home ownership in remote areas reflect, among other things, the provision of housing by Indigenous Community Housing Organisations on traditional Aboriginal and Torres Strait Islander lands.

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ONE PARENT HOUSEHOLDS

In 2007-08, there were about 500,000 one parent households with dependent children in Australia. One parent households with dependent children were more likely to be renting (60%) than owning their home (38%). In comparison, in 2007-08 households of couples with dependent children had a higher home ownership rate (77%) than the national average.

Those one parent households that were renting were more likely to be renting through a state or territory housing authority (26%) than were the rest of the renting population (14%).

In 2007-08, 8% of one parent households with dependent children were living in dwellings that required at least one extra bedroom to adequately accommodate the residents of the household, compared with 3% for all Australians.

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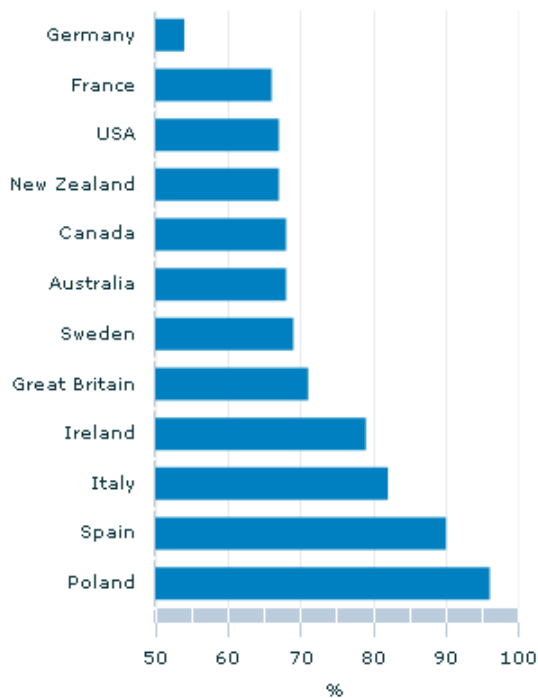
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Housing

Home ownership rates in selected OECD countries



Footnote(s): (a) Year of collection and method of collection varies across countries and may impact on comparisons. See the Housing datacube for more information.

Source(s): Various. See the Housing datacube for more information.

INTERNATIONAL COMPARISONS

Home ownership, rather than rented accommodation, is the most common tenure type in Australia and in many other OECD countries. In 2007-08, 68% of Australian households owned their own home. This is similar to home ownership rates in the United States (67% in 2007), Canada (68% in 2006) and New Zealand (67% in 2006). However, rates of home ownership vary substantially between OECD countries. In 2006, Italy (82%), Spain (90%) and Poland (96%) all had a much higher proportion of home ownership than Australia, whereas Germany (54%) had a significantly lower rate of home ownership. Although there may be higher levels of home ownership in some European countries, the quality of the dwellings may differ substantially from that expected and experienced in Australia in terms of size and the quality of physical conditions and amenities.

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Housing

LINKS TO OTHER DIMENSIONS OF PROGRESS

Housing conditions are influenced by many factors, but most particularly the economic circumstances of households. Unmet housing needs generally reflect low levels of socioeconomic wellbeing and are often associated with other areas of concern such as poor health and crime. As housing affordability is the capacity of households to meet their current and future housing costs, there is a strong link between housing issues and economic resources. The value of Australia's housing stock is a key component of national wealth.

The extent of homelessness is an associated issue of concern. However, housing shortages are not usually the primary cause of homelessness, as it is often related to other social issues such as mental health, long-term unemployment, and family and relationship breakdowns, rather than with aspects of housing per se, and is therefore discussed in the commentary on Family, community and social cohesion.

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Housing

HOUSING GLOSSARY

Acceptable dwelling standard

For the purposes of this section, dwellings are regarded as being of an acceptable standard if they have four working facilities (for washing people, for washing clothes/bedding, for storing/preparing food, and sewerage) and with no more than two major structural problems (major cracks in walls or floors, major plumbing problems, and wood rot or termite damage).

Affordable homes (home buyers)

For the purposes of this section, the proportion of homes sold that are affordable to moderate income households is determined based on the following assumptions:

- Low and moderate income households are those with equivalised disposable household incomes (EDHI) in the bottom three quintiles, calculated on a state-by-state basis, and separately for capital city and balance of state.
- The indicator is calculated for those at the top of the moderate income range, i.e. at the top of third quintile, in each of the state by capital city/balance of state regions.
- Gross household income for those households at the top of the third quintile is measured as the median gross household income for all households in the EDHI percentile range 59-61.
- Homes are assessed to be affordable when the household spends no more than 30% of their gross income on mortgage payments (including both interest and capital repayments).
- Mortgage payments are calculated using: the standard monthly variable interest rate series published by the Reserve Bank of Australia, averaged over the year; assumed 10% deposit on the full purchase price; and repayments over a 25 year loan contract.

The number of affordable homes is then taken as a proportion of the number of households within the population on a state-by-state basis, and separately for capital city and balance of state.

Affordable homes (home buyers) - per 1,000 households

The number of homes sold that are affordable to moderate income households per 1,000 households is calculated by determining the number of homes sold that are affordable to moderate income households based on the same assumptions as outlined above in 'Affordable homes (home buyers)'. The calculation is based on the number of homes affordable divided by the number of households within the population instead of the number of homes sold.

Affordable homes (home buyers) - states and territories

For state and territory analysis of housing affordability for home buyers, the assumptions used are the same as those outlined above in 'Affordable homes (home buyers)'. However, for the Northern Territory and the Australian Capital Territory, due to the smaller sample size in the 59-61 EDHI percentile range, gross household income is measured as the median gross household income for all households in the territory in the EDHI percentile range 55-65 for 2005-06.

Canadian National Occupancy Standard

A standardised measure of housing utilisation and overcrowding. This measure assesses a household's bedroom requirements by specifying that:

- there should be no more than two people per bedroom;
- a household of one unattached individual may reasonably occupy a bed-sit (i.e. have no bedroom);
- couples and parents should have a separate bedroom;
- children less than five years of age, of different sexes, may reasonably share a bedroom;
- children five years of age or over, of the opposite sex, should not share a bedroom;
- children less than 18 years of age and of the same sex may reasonably share a bedroom; and
- single household members aged 18 years or over should have a separate bedroom.

Commonwealth Rent Assistance (CRA)

Where applicable, Commonwealth Rent Assistance (CRA) has been excluded from the housing costs and gross income of recipients. CRA is a non-taxable income supplement paid through Centrelink to individuals and families who rent in the private rental market. It is only paid to recipients of another government benefit or pension, and is paid in conjunction with that other benefit. In this section, CRA payments have been modelled based on Centrelink eligibility requirements. Characteristics collected in the Survey of Income and Housing, such as the family and household composition, ages, type of government payments received, currently weekly income from government allowances, rental payments and the tenure and landlord details, are used to calculate the eligibility and amount of CRA for each income unit within the survey sample.

Disposable income

Gross income less income tax, the Medicare levy and the Medicare levy surcharge i.e. remaining income after taxes are deducted, which is available to support consumption and/or saving. Income tax, Medicare levy and the Medicare levy surcharge are imputed based on each person's income and other characteristics as reported in the survey. Disposable income is sometimes referred to as net income.

Equivalised disposable household income

Disposable household income adjusted using an equivalence scale. For a lone person household it is equal to disposable household income. For a household comprising more than one person, it is an indicator of the disposable household income that would need to be received by a lone person household to enjoy the same level of economic wellbeing as the household in question. For further information see Appendix 3 in ABS Household Income and Income Distribution, Australia, 2007-08 (cat. no. 6523.0).

Family composition

Classifies households into three broad groupings based on the number of families present (one family, multiple family, and non-family). One family households are further disaggregated according to the type of family (such as couple family or one parent family) and according to whether or not dependent children are present. Non-family households are disaggregated into lone person households and group households.

Gross income

Income from all sources, whether monetary or in kind, before income tax or the Medicare levy are deducted.

House price index (HPI)

The HPI measures price change of the stock of established houses over time. While other price indexes produced by the ABS provide a weighted average of the price changes in a group of goods or services, the HPI specifically measures prices of established, detached houses in each of the capital cities in Australia. Separate indexes are produced for each capital city, and these indexes are combined to produce a weighted average index of the eight capital cities. For more detailed information on house price indexes than is provided in these explanatory notes refer to the ABS Information paper, House Price Indexes: Concepts, Sources and Methods, Australia, 2009 (cat. no. 6464.0).

Housing costs

Housing costs for the purpose of the headline indicator and rental stress indicator include rent payments and rates payments (general and water).

Housing costs as a proportion of income

The total weekly housing costs of a group are divided by the total weekly income of that group, and expressed as a percentage. Households with nil or negative total income are not included in this calculation.

Indigenous

Refers to people who identified themselves, or were identified by another household member, as being of Aboriginal and/or Torres Strait Islander origin.

Low and moderate income households (home buyers)

Low and moderate income households are those with equivalised disposable household incomes (EDHI) in the bottom three quintiles, calculated on a state-by-state basis, and separately for capital city and balance of state. The indicator is calculated for those at the top of the moderate income range, i.e. at the top of third quintile, in each of the state by capital city/balance of state regions. Gross household income for those households at the top of the third quintile is measured as the median gross household income for all households in the EDHI percentile range 59-61.

For state and territory analysis of housing affordability for home buyers, the assumptions used are the same as those outlined above, however, for the Northern Territory and the Australian Capital Territory, due to the smaller sample size in the 59-61 EDHI percentile range, gross household income is measured as the median gross household income for all households in the territory in the EDHI percentile range 55-65 for 2005-06.

See also 'Affordable homes (home buyers)'.

Low income rental affordability

Housing costs as a proportion of gross household income for low income renters.

Low income renters

For the housing section, low income renter households are defined as the 40% of households with equivalised disposable household income (excluding CRA) at or below the 40th percentile, calculated for capital city and balance of state, on a state-by-state basis. See also 'Commonwealth Rent Assistance (CRA)'.

Owner (of a dwelling)

A household in which at least one member owns the dwelling in which the household members usually reside. Owners are divided into two classifications - owners without a mortgage and owners with a mortgage. If there is any outstanding mortgage or loan secured against the dwelling the household is an owner with a mortgage. If there is no mortgage or loan secured against the dwelling the household is an owner without a mortgage.

Overcrowding

See 'Canadian National Occupancy Standard'.

Private renter

A household paying rent to any landlord other than a state or territory housing authority/trust (i.e. renting from a real estate agent, a parent or other relative not in the same household or another person not in the same household).

Public renter

A household paying rent to a state or territory housing authority/trust.

Quintiles

Groupings that result from ranking all households or people in the population in ascending order according to some characteristic, such as their household income, and then dividing the population into five equal groups, each comprising 20% of the estimated population. In this publication the quintiles are formed by ranking people by their equivalised disposable household income.

Rental stress

A renter household is in rental stress with its housing costs (excluding CRA) are more than 30% of the gross household income (excluding CRA).

Tenure type

The nature of a household's legal right to occupy the dwelling in which they usually reside. Tenure is determined according to whether the unit owns the dwelling outright, owns the dwelling but has a mortgage or loan secured against it, is paying rent to live in the dwelling or has some other arrangement to occupy the dwelling.

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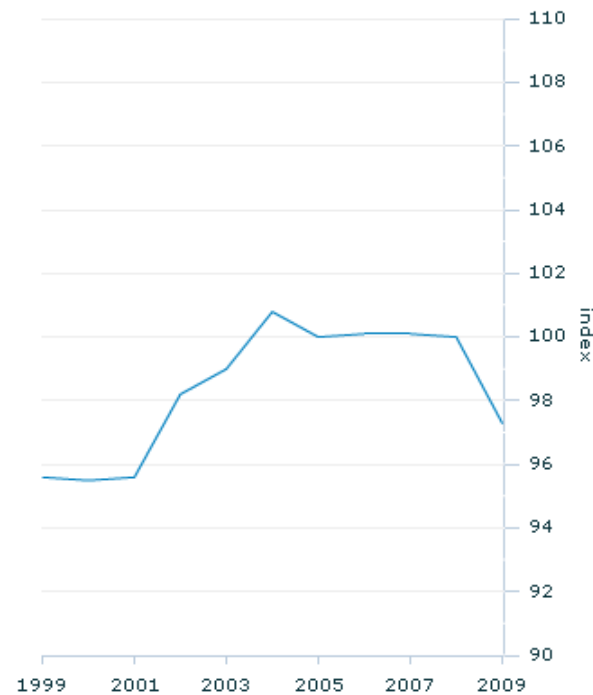
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Productivity



Multifactor productivity(a)(b)

During the early part of the decade from 1999 to 2009, Australia experienced improved productivity. Recent years have seen Australia's productivity index plateau, and in 2008-09 productivity fell 2.7% compared with the previous year.

(a) Year ending 30 June. (b) Reference year for MFP indexes is 2007-08 = 100.



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Productivity

PRODUCTIVITY AND PROGRESS

Productivity is the efficiency with which an economy transforms inputs (such as labour and capital) into outputs (such as goods and services). When a nation achieves productivity growth, it is able to produce more goods and services from the same quantity of labour, capital, land, energy and other resources. In turn, improved production efficiency can generate higher real incomes and lead to long-term improvements in Australia's living standards.

Productivity growth is an important indicator of whether life in Australia is improving, as it contributes significantly to the overall productive capacity of the national economy. In the future, productivity growth is expected to be the main driver of economic growth and living standards in Australia. This is especially important given the economic challenges that Australia faces. The Australian Government's Intergenerational Report 2010 noted that "With the ageing population, productivity growth will be key to driving future growth in living standards".

In this section, multifactor productivity (MFP), measured as the amount of GDP produced per unit of a combined bundle of labour and capital, is used as the headline indicator for productivity improvement in Australia. MFP statistics are designed to inform how much economic growth originates from productivity growth (increased outputs from the same quantity of inputs) and how much from increased inputs (increased outputs from more capital goods or additional working hours). At present, it is the most comprehensive available measure of productivity in Australia.

Further information regarding investment in various forms of knowledge and innovation has been included to provide context around the broad subject of productivity in Australia. Examples include the number of businesses innovating, the amount of money spent on research and development, the adoption of Internet and information technologies by businesses, and the quality of labour in Australia. While the influence of these indicators on overall productivity is varied, they help to illustrate the degree to which Australia is engaged in improving productivity, and provide context to understand which levels of the economy this is occurring.

For a full list of definitions used in Productivity, please see the Productivity glossary.

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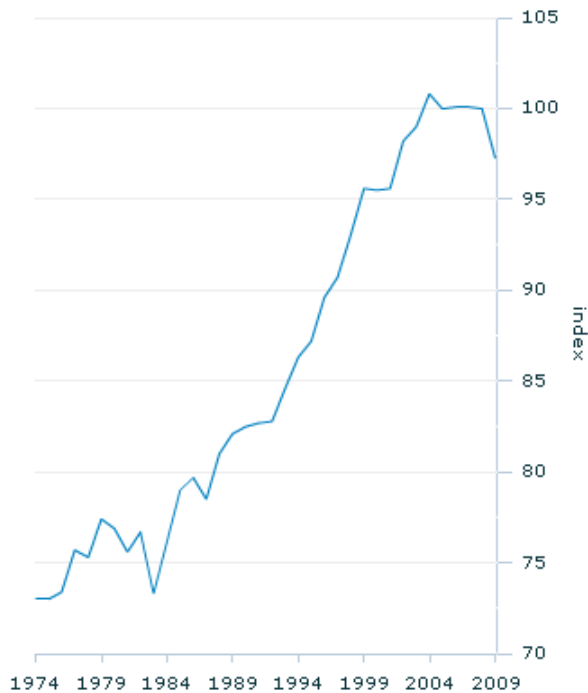
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Productivity

Multifactor productivity(a)(b)



Footnote(s): (a) Year ending 30 June. (b) Reference year for MFP indexes is 2007-08 = 100.

Source(s): ABS Experimental Estimates of Industry Multifactor Productivity, 2008-09 (cat. no. 5260.0.55.002)

PRODUCTIVITY

ABS productivity measures are important indicators for gauging Australia's economic progress, and provide a basis for governments and the broader community to examine aggregate trends in productivity growth over the longer term.

The most comprehensive Australian measure of productivity available is multifactor productivity. It gauges the efficiency with which inputs are transformed into outputs. In the short term, this reflects the impact of an array of factors, such as the utilisation of available labour and capital, economies of scale, and resource reallocation. In the long-term, it represents improvements in ways of doing things (technical progress), which is the ultimate source of economic growth and higher living standards.

During the productivity growth cycle of 1998-99 to 2003-04, there was an overall improvement in productivity. Output growth for the market sector grew at an average rate of 3.2% per year. Input growth during this period was 2.1% per year, with labour growing at 1.0% and capital at 3.4% on average each year. The 1.1% difference between input growth and output growth was the average annual improvement in productivity.

In the most recent productivity growth cycle (2003-04 to 2007-08) there was an overall decline in Australia's productivity. Output growth during this cycle averaged 3.6% per year, while total inputs grew at an average 3.8% per year (labour at 2.4%, capital at 5.4%). The -0.2% difference between input growth and output growth was the average annual decline in productivity.

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Productivity

INDUSTRY

Productivity improvements across the Australian economy differ appreciably from industry to industry, reflecting many factors. Some industries, for example, may experience changes in productivity as a result of significant technological advances or industrial reorganisation. Others, such as agriculture, and electricity, gas, water and waste services can have their overall productivity considerably influenced by factors like the weather and the availability of water - factors distinct from an economic notion of productivity or technical progress. Another example is that the influence of the depletion of resources, and the lag between mining investment and increased output, are not adjusted for in official productivity measures for the mining industry.

In recent years, there have been ongoing efforts by the Productivity Commission, the ABS, and other researchers to examine these influences. These studies are complementary to official statistics and shed further light on some of the hard to measure influences, to better understand the drivers of productivity.

For the decade 1998-99 to 2008-09, the most significant growth in productivity occurred in the agriculture, forestry and fishing industry (2.6% per year on average), the financial and insurance services industry (1.4%), the transport, postal and warehousing industry (1.2%), and the retail trade industry (1.1%). Industries that experienced considerably reduced productivity during this period included the electricity, gas, water and waste services industry (-3.1%), and the mining industry (-2.8%). For industries recording reduced productivity, factors other than pure technical change have been found to be influential and therefore the growth results should be treated with caution.

Of note is the fact that not all Australian industries are covered under current multifactor productivity measures. This is due largely to the fact that the outputs of some service-producing industries are hard to measure, in particular for those services provided by governments. A significant challenge is to ensure that productivity in these industries is accurately assessed in the future especially given that the performance of these industries (such as health and education) is critical to governments and the economy.

Multifactor productivity(a), average annual growth rate - 1998-99 to 2008-09

Industry	%
Agriculture, Forestry and Fishing	2.6
Mining	-2.8
Manufacturing	-0.1
Electricity, Gas, Water and Waste Services	-3.1
Construction	0.3
Wholesale Trade	0.7
Retail Trade	1.1
Accommodation and Food Services	0.3
Transport, Postal and Warehousing	1.2
Information, Media and Telecommunications	-0.2
Financial and Insurance Services	1.4
Arts and Recreation Services	0.6
Selected industries	0.2
Market sector industries(b)	-0.1

(a) Gross value added based measures.

(b) Also includes Rental, hiring and real estate services; Professional, scientific and technical services; Administrative and support services; and Other services.

Source: ABS Experimental Estimates of Industry Multifactor Productivity, 2008-09 (cat. no. 5260.0.55.002)

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KNOWLEDGE AND INNOVATION

Improvements in a nation's productivity can be the result of a wide variety of large and small scale influences. The OECD Innovation Strategy noted that "The world today faces significant economic, environmental and social challenges. While no single policy instrument holds all the answers, innovation is the key ingredient of any effort to improve people's quality of life". In terms of a country's economic wellbeing, the OECD Innovation Strategy added that "Innovation, which involves the introduction of a new or significantly improved product, process or method, will increasingly be needed to drive growth and employment and improve living standards".

It is widely accepted that business innovation activities and resulting performance are key drivers of technical progress (i.e. productivity). Productivity gains can be derived from various practices that promote knowledge and innovation. Increased knowledge and innovation can drive the development of new or improved products and lead to the streamlining of business processes and practices.

While there is no single indicator that can measure all aspects of knowledge and innovation in Australia, several indicators, for which data is available, are provided. These include the proportion of businesses that are innovating, Australia's investments in knowledge (namely expenditure in research and development), business use of the Internet, and improvements in the quality of labour.

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Productivity

INNOVATION

In 2008-09, more than one third of firms in Australia (35%) introduced an innovation to their business. The most frequently implemented innovation was the introduction of new or significantly improved organisational or managerial processes (19% of businesses), followed by new or significantly improved goods or services (18%).

Certain types of businesses were more likely to innovate than others. Two out of five businesses in the wholesale trade (44%) and manufacturing (42%) industries introduced an innovation in 2008-09, compared with 26% of businesses in the construction industry.

Larger businesses were more likely to innovate than smaller businesses. Innovations were introduced by 61% of businesses with 200 or more employees in 2008-09, compared with 28% of businesses with fewer than five employees.

Proportion of businesses innovating - 2008-09

Businesses which introduced any new or significantly improved:	%
Goods or services	18.2
Operational processes	16.3
Organisational/managerial processes	19.4
Marketing methods	17.2
Innovating businesses	35.0

Source: ABS Summary of IT Use and Innovation in Australian Business, 2008-09 (cat. no. 8166.0)

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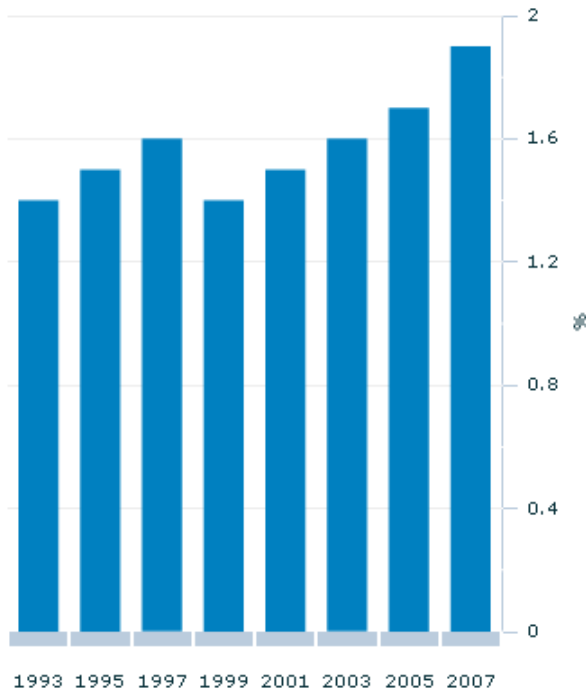
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Productivity

Research and development(a)(b)



Footnote(s): (a) Expenditure as a proportion of GDP (b) Year ending 30 June.

Source(s): ABS Research and Experimental Development, All Sector Summary, Australia, 2006-07 (cat. no. 8112.0); ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0)

RESEARCH AND DEVELOPMENT

Research and development (R&D) increases the stock of knowledge and innovation in the economy. In 2006-07, gross expenditure on R&D within Australia was \$21 billion.

Recent years have seen a gradual increase in the proportion of GDP spent on R&D activities. At its previous peak in 1996-97, the proportion of Australian GDP spent on R&D was 1.6%. In 2006-07, although still below the average ratio of OECD countries (2.3%), the proportion of Australian GDP spent on R&D had risen to 1.9%.

The business sector continued to provide the majority of funding for R&D in Australia. In 2006-07, 57% of all R&D funding came from the business sector, a rise from 48% in 1996-97. In contrast, the proportion of funding originating from federal and state governments declined, from 24% in 1996-97 to 14% in 2006-07. Contributions from other sources including universities and non-profit organisations, have remained stable at around 29%.

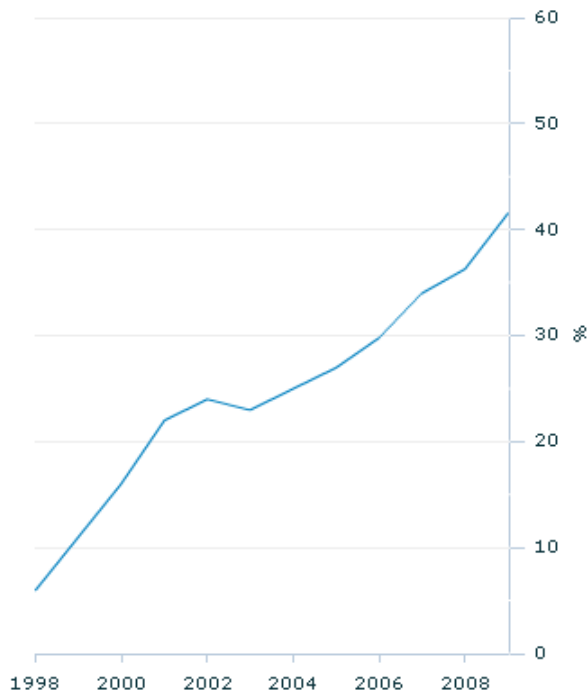
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Businesses with a website(a)(b)



Footnote(s): (a) Year ending 30 June.
(b) Data unavailable for 1999 and have been interpolated. 2003-2008 estimates are post introduction of The New Tax System and may not be comparable with previous estimates.

Source(s): ABS Summary of IT Use and Innovation in Australian Business (cat. no. 8166.0); ABS Business Use of Information Technology (cat. no. 8129.0)

BUSINESS TAKE-UP OF THE INTERNET

The Internet is an important avenue for innovation in Australia. Business use of the Internet can streamline the ways in which firms deliver goods and services to customers, and can provide new opportunities for businesses to provide new services to clients.

The proportion of businesses with a web presence has continued to increase since the late 1990s. In 1997-98, less than one in ten (6%) businesses had web presence either on their own website or through that of another entity. This contrasts with figures for 2008-09 where 42% of all businesses had a web presence.

Larger businesses continue to be more likely to have a presence on the web. In 2008-09, 95% of businesses employing 200 people or more had a website or homepage compared with 31% of small businesses with fewer than five employees.

Although only a small proportion of businesses (27%) receive orders via the Internet or web, the likelihood of this being influenced by business size is less pronounced. In 2008-09, 24% of businesses with fewer than five employees received orders via the Internet or web compared with 36% of businesses with 200 or more employees. In part, this figure reflects the different industry sectors represented by small and big

business.

Proportion of businesses with a website or homepage(a)(b)

No. of employees	1998 %	2000 %	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %
1-4	4	9	14	15	15	16	17	22	25	27	31
5-19	8	24	32	34	33	38	41	41	44	48	53
20-199	21	46	56	55	51	58	59	60	68	65	70
200 or more	58	68	81	81	80	83	91	94	95	96	95
All businesses	6	16	22	24	23	25	27	30	34	36	42

(a) Year ending 30 June.

(b) 2003-2008 estimates are post introduction of The New Tax System and may not be comparable with previous estimates.

Source: ABS Summary of IT Use and Innovation in Australian Business (cat. no. 8166.0); ABS Business Use of Information Technology (cat. no. 8129.0)

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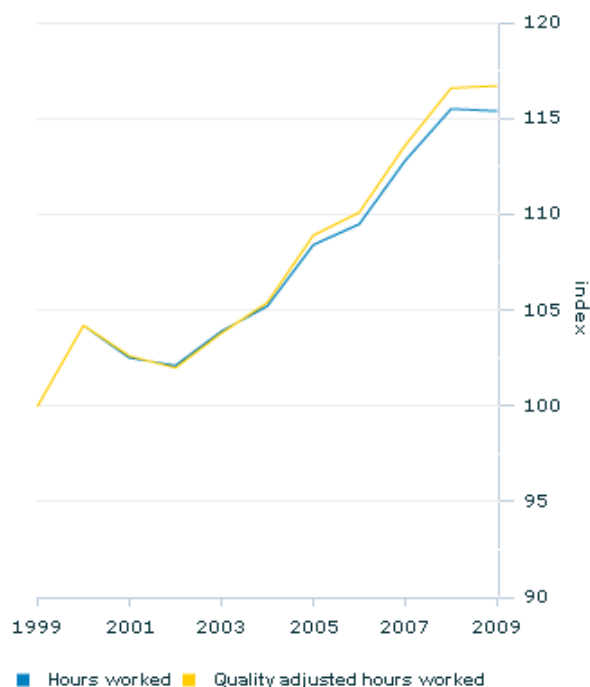
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Quality growth of labour inputs(a)(b)



Footnote(s): (a) Year ending 30 June.
(b) Reference year for index is 1998-99 = 100.

Source(s): ABS Experimental
Estimates of Industry Multifactor
Productivity, 2008-09 (cat. no.
5260.0.55.002)

HUMAN CAPITAL

Human capital is widely accepted as a key driver of productivity growth. In Australian MFP statistics, the impact of human capital is captured by accounting for compositional changes in the work force due to factors such as changes in educational attainment and workforce experience. As more knowledgeable and skilful workers join the work force, the overall productive capacity of labour is enhanced. The quality adjusted labour input indicator recognises the heterogeneity among workers in terms of their productivity and provides a more accurate measure of labour input used in production.

The ABS publishes aggregate productivity measures based on both an hours worked and quality adjusted hours worked basis. The latter index proxies quality change through two components: educational attainment and years of potential work experience. The trend in the Australian labour market is towards becoming more skilled and more qualified. Consequently, the quality adjusted labour input index provides an indication of the overall quality change of the labour force in Australia.

Between 1998-99 and 2008-09, the hours worked index of labour inputs increased on average by 1.4% a year, whereas the quality adjusted hours worked index increased by 1.6% a year. This indicates there was an overall improvement in the quality of Australia's workforce during this time, increasing the contribution of labour inputs to growth, and therefore decreasing measured labour and multifactor productivity estimates. The result is that between 1998-99 and 2008-09, the annual average multifactor productivity improvement was 0.1% when adjusted to take into account labour quality, and 0.2% when no adjustment for labour quality was made.

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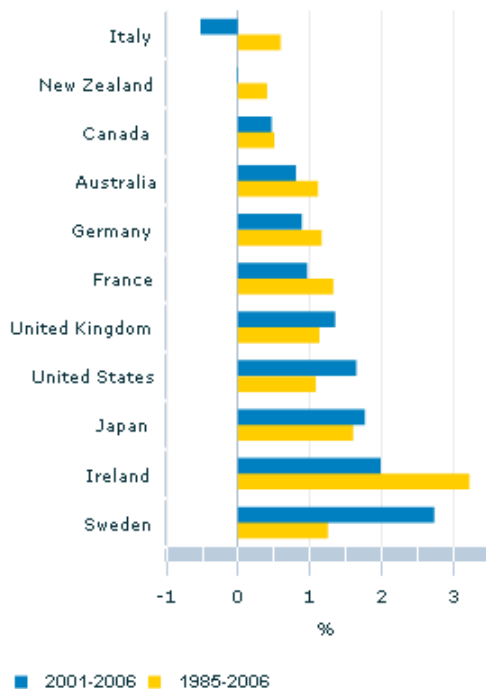
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Average annual multifactor productivity growth - 1985-2006(a)



Footnote(s): (a) 1985-2004 for Australia and Japan, 1985-2005 for Ireland and the United Kingdom.

Source(s): OECD Compendium of Productivity Indicators 2008

INTERNATIONAL COMPARISONS

Many OECD nations, including Australia, experienced a slowdown in multifactor productivity growth during the 2001-2006 period when compared with the longer period of 1985-2006. In particular, Ireland, Italy, and New Zealand all experienced a considerable decline in productivity growth, with Italy and New Zealand both having negative growth in productivity in recent times (2001-2006).

In comparison, some OECD nations were able to increase multifactor productivity growth during the 2001-2006 period. These included Japan, Sweden, the United Kingdom and the United States, all of which experienced growth in productivity in the 2001-2006 period compared with the longer period 1985-2006.

No OECD nation experienced negative productivity growth during the extended period 1985-2006. This indicates the general trend of improving productivity in advanced economies.

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Productivity

LINKS TO OTHER DIMENSIONS OF PROGRESS

Productivity is an important source of output growth, and contributes to growth in national income. During a period of productivity growth, it is possible to raise real wages and other incomes without increasing inflationary pressures. Also, industries that experience higher rates of productivity growth can enhance their competitiveness.

Education is important as it both disseminates existing knowledge among the Australian population and enhances the probability that Australians will generate or adopt new technologies and other innovations.

Knowledge and innovation can contribute to Australia's productivity growth (and hence to improvements in national income and competitiveness) because they enhance the prospects of technological advances and of improvements to management and work practices and other aspects of economic production. Knowledge and innovation can also result in improved approaches to satisfying the needs of Australians (for example, through better health services) and to protecting Australia's environmental resources.

Natural assets (such as soil, minerals, water and timber) are used in production. If Australian industry can use such assets more efficiently, economic growth will, for a given volume of output, require less draw-down of these resources and so have a smaller impact on the environment.

Unmitigated climate change would have a negative impact on productivity growth. If left unabated, it is estimated that agricultural productivity could decline in Australia by as much as 17% by 2050 as a direct result of climate change (Treasury 2010).

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Productivity

PRODUCTIVITY GLOSSARY

Gross Domestic Product (GDP)

The total market value of goods and services produced in Australia within a given period after deducting the cost of goods and services used up in the process of production but before deducting allowances for the consumption of fixed capital. Thus gross domestic product, as here defined, is 'at market prices'. It is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services.

Innovation

Innovation refers to the implementation of any new or significantly improved goods or services; method of producing or delivering goods or services; strategies, structures or routines of a business which aim to improve performance; or design, packaging or sales methods aimed to increase the appeal of goods or services.

Labour productivity

Labour productivity estimates are indexes of real GDP per hour worked. They indicate the volume of output produced per hour of labour expended in production. Labour productivity indexes reflect not only the contribution of labour to changes in product per labour unit, but are also influenced by the contribution of capital and other factors affecting production.

Multifactor productivity

Multifactor productivity (MFP) is the part of output growth that cannot be attributed to the growth of labour or capital inputs. MFP reflects such things as business process innovations, advances in technology, or almost any other type of improvement in the efficiency of a firm's operations. When MFP rises, the economy can produce more output with the same quantity of labour and capital. MFP can be equated with technological change if certain conditions are met (e.g. firms seek to maximise profits, markets are competitive, and the coverage of inputs is complete). Because these conditions are typically not met, measured MFP will, in addition to technological change, include the effects of model misspecification and errors in the measurement of the variables.

OECD

Organisation for Economic Co-operation and Development.

Output

Output consists of those goods and services that are produced within an establishment that become available for use outside that establishment, plus any goods and services produced for own final use.

Productivity growth cycle

A common method of examining changes in productivity over an extended period involves identifying and dividing the data into productivity 'growth cycles'. Year to year changes in measured productivity may reflect changes that are conceptually distinct from the notion of productivity. By analysing averages of productivity statistics between growth cycle peaks, the effects of some of these temporary influences can be minimised, allowing better analysis of the drivers of productivity growth in different periods. Productivity growth cycle peaks are determined by comparing the annual MFP estimates with their corresponding long-term trend estimates. The peak deviations between these two series are the primary indicators of a growth-cycle peak, although general economic conditions at the time are also considered.

Quality adjusted labour productivity

This measure of labour productivity is an index of real GDP per hour worked adjusted for changes in the aggregate quality of labour. Changes in the quality of labour may be due to factors such as changes in educational attainment and the length of experience in the workforce.

Research and development

Research and development (R&D), as collected by the Australian Bureau of Statistics (ABS), is defined in accordance with the OECD standard as "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications". Although outside the economic boundary of R&D as defined by the OECD, R&D performed overseas by Australian organisations is included in the data presented.

Web presence

Web presence includes a web site, home page or presence on another entity's web site. A web site or home page is an electronic document that is accessed via a unique address on the World Wide Web. The document provides information in a textual, graphical or multimedia format. Web presence excludes online listings.

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Inflation

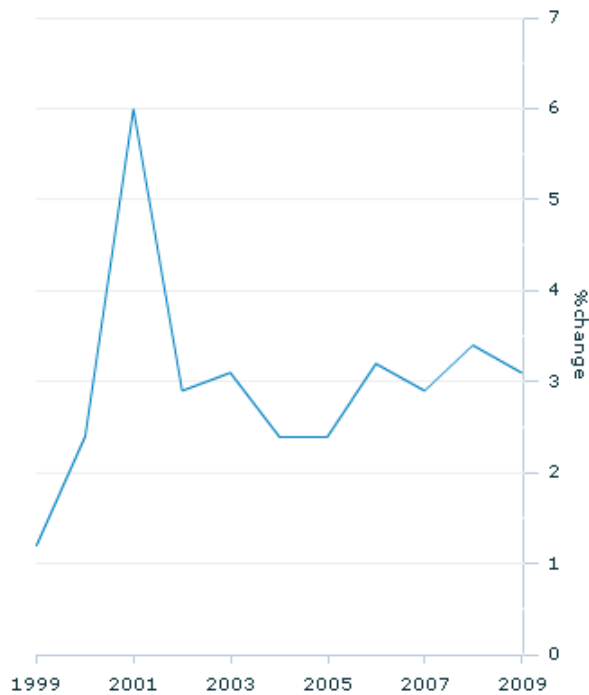
Inflation, while not given headline status, has nevertheless been included as a supplementary dimension because of its relevance to whether life in Australia is getting better.

Since 2001-02, the annual rate of inflation in Australia as measured by the Consumer Price Index has remained reasonably stable at around 3%.

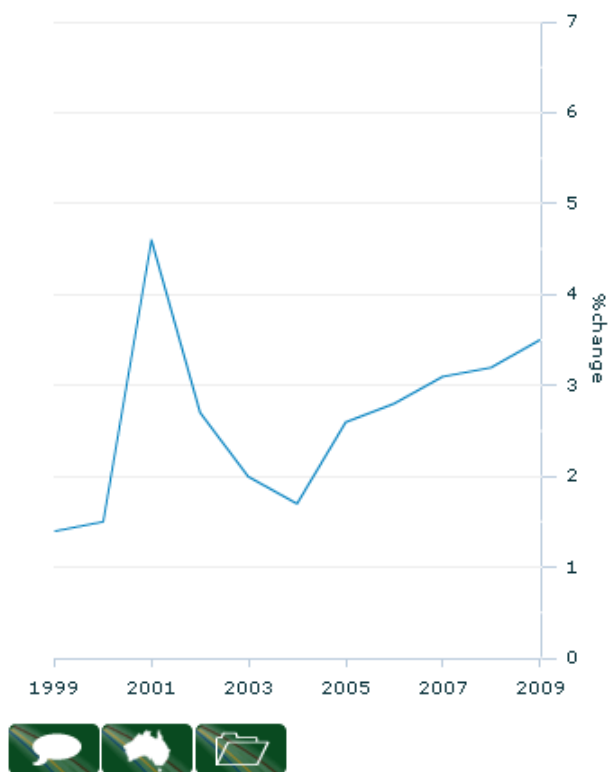
Since 2004-05, the rate of inflation expressed in the Domestic Final Demand price index has been similar to that seen in the CPI.

The sharp movement recorded in both indexes earlier in the decade was largely due to changes to Australia's tax system.

Consumer Price Index



Domestic Final Demand



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Inflation

INFLATION AND PROGRESS

Inflation - an upward movement in the general level of prices - can impose costs on individuals and the economy. Over time, inflation reduces the purchasing power of money and can lead to market inefficiencies. A low and stable rate of inflation is desirable both for the health of the economy and for individual welfare.

Inflation is an important aspect of progress as it affects economic stability. Large or unanticipated changes in prices can distort the behaviour of consumers and businesses, who may find it more difficult to predict the effects of their saving and investment decisions. Inflation can also put upward pressure on wages as people struggle to meet rising costs, and can reduce trade competitiveness as prices of exports increase.

Although inflation is defined as a rise in the general level of prices, not all prices change at the same rate or even in the same direction. For this reason, inflation can also affect the distribution of real income and wealth among individuals and households. For example, a relatively steep increase in the prices of items that make up a large part of low income households' expenditure can cause greater inequality in the distribution of real household income (University of Melbourne 1996).

Inflation, while not included as a headline dimension, has been included as a supplementary dimension because of its relevance to progress. There is no single correct measure of inflation. Ideally, an indicator would be comprehensive, covering price changes for all goods and services traded in the economy. But different measures of price change are suited to analysing different economic phenomena, and so instead, this commentary relies on two commonly used indicators of inflation - the Consumer Price Index (CPI) and the national accounts chain price index for Domestic Final Demand (DFD). While both are influenced by temporary market volatility, and neither are immune to other economic influences, they are the most comprehensive indicators available to provide a broad picture of inflationary trends in the medium to long term.

Further information has also been provided on the capital and consumption components of inflation. Statistics on these components are also important as they describe how prices for capital assets, and for goods and services, have changed in Australia over time.

For a full list of definitions used in Inflation, please see the Inflation glossary.

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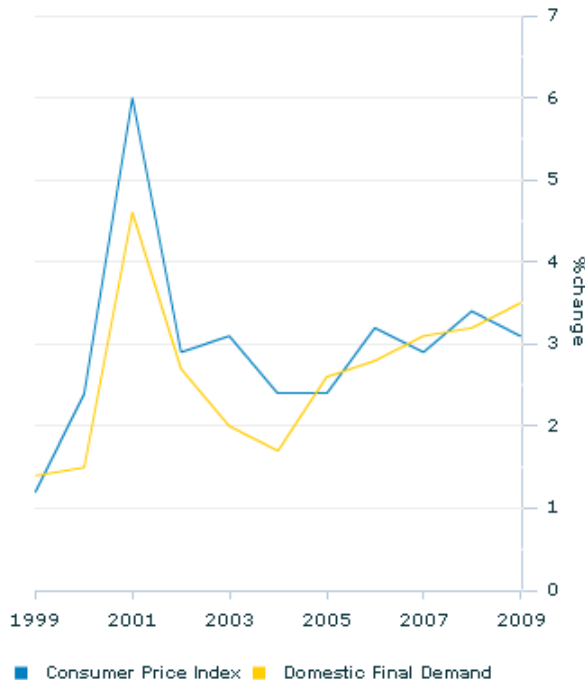
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Inflation

CPI(a) and DFD chain price index(b)



Footnote(s): (a) Annual average. (b) Percentage change from previous year ending 30 June.

Source(s): ABS Consumer Price Index, Australia, March quarter 2010 (cat. no. 6401.0); ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0)

INFLATION

The Consumer Price Index (CPI) and the chain price index of Domestic Final Demand (DFD) are two important indicators of inflation in Australia. They measure the general rate at which prices change in Australia. The CPI has been designed as a general measure of price inflation faced by households, while the DFD price index covers final purchases by business and government as well as households.

Between 2001-02 and 2008-09, the rate of annual inflation expressed by the CPI remained relatively low at around 3%. This is broadly in line with Reserve Bank objectives, which stipulate that the desirable medium term CPI rate of inflation should be between 2% and 3% (RBA 2010). The rate of inflation expressed in the DFD price index during this time also remained low, with the DFD inflation trend being similar to that seen in the CPI.

The introduction of The New Tax System (TNTS) saw large increases in both indexes between June 2000 and September 2001, the majority of which occurred in the September quarter of 2000. However, movements such as this should be viewed cautiously as temporary volatility in inflation indicators may not necessarily reflect changes to the underlying inflationary trend (RBA 2010).

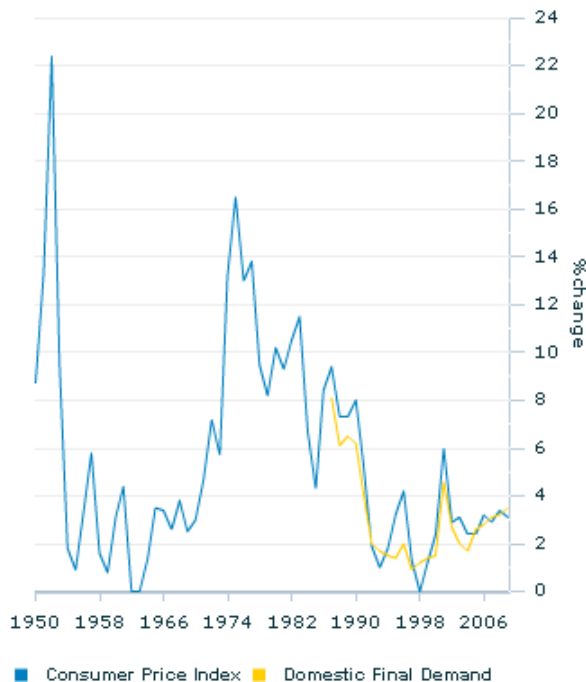
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Inflation

CPI(a) and DFD chain price index - 1950-2009(b)



Footnote(s): (a) Annual average. (b) Percentage change from previous year ending 30 June.

Source(s): ABS Consumer Price Index, Australia, March quarter 2010 (cat. no. 6401.0); ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0)

LONG TERM INFLATION TRENDS

Levels of inflation in Australia are influenced by a range of local and international factors. From the mid-1950s to the late 1960s, the level of inflation in Australia remained relatively low until a sharp rise in the first half of the 1970s. This was influenced by higher oil prices, wage growth and other factors. These inflationary pressures persisted into the 1980s, partly due to a second oil price shock, and although at relatively high levels, inflation was fairly stable during the 1980s (EPAC 1990). By the 1990s, the rate of inflation had slowed with falling world prices of cars and computers contributing towards lower inflation (Treasury 1999). During the 2000s, inflation remained stable at around 3% with the only significant change to inflation occurring during the early part of the decade due to changes to Australia's tax system.

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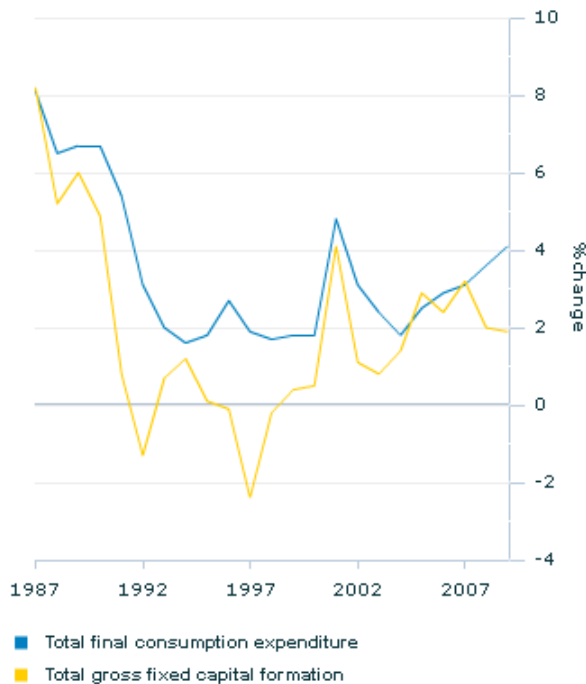
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Inflation

Total FCE and GFCF chain price indexes(a)



Footnote(s): (a) Percentage change from previous year ending 30 June.

Source(s): ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0)

COMPONENTS OF INFLATION

The DFD chain price index can be split into capital and consumption components (for various reasons the consumption component does not match the coverage of the CPI exactly).

Compared with each other, final consumption expenditure and gross fixed capital formation involve a rather different mix of commodities, and the factors influencing price change are quite different. For example, changes in the exchange rate are likely to have a bigger impact on prices for fixed capital formation. Thus, one would not always expect both series to behave in exactly the same way.

The direction and magnitude of the annual percentage change in the consumption series were often quite different to those in the capital series during most of the 1990s, with the capital series appearing considerably more prone to volatility. However, the percentage movements for the two series were more similar in the mid-2000s, and in line with the broader inflation trend. The percentage movements for the two components have since diverged again in recent years (the last two financial years to 2008-09).

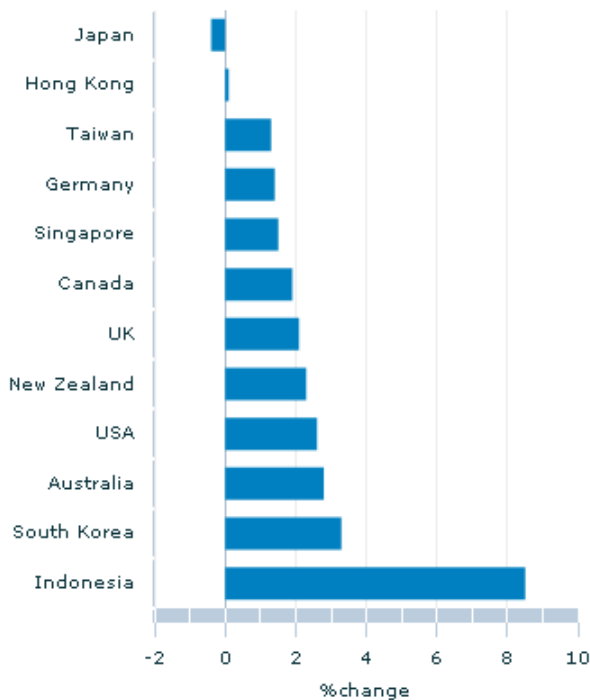
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Inflation

Average annual CPI change - 1999-2009(a)



Footnote(s): (a) Annual CPI has been calculated as an average of four quarters year ending 30 June and excludes housing, financial and insurance services.

Source(s): ABS Consumer Price Index, Australia, March quarter 2010 (cat. no. 6401.0)

INTERNATIONAL COMPARISONS

National rates of inflation influence many aspects of international trade and investment. High or volatile rates of inflation can influence decisions on international trade and investment compared with nations with stable low inflation which present a lower risk. Therefore in analysing price movements in Australia, an important consideration is Australia's performance relative to other selected countries.

Using an internationally comparable definition of CPI in 2008-09, the annual rate of inflation in Australia was 2.4%. This was below New Zealand (3.2%), the United Kingdom (3.8%), South Korea (4.4%) and Indonesia (8.9%). However, the 2008-09 annual rate of inflation in Australia was higher than Japan (0.6%), the United States (1.2%), and Canada (1.2%).

Between 1998-99 and 2008-09, the average annual rate of inflation in Australia was 2.8%. This was similar to that in the Republic of Korea (3.3%) and the United States (2.6%). In contrast, there was overall deflation in prices in Japan during this time with the average annual rate of change of prices being -0.4%. The largest growth in prices occurred in Indonesia with an average annual inflation of 8.5% between 1998-99 and 2008-09 (Endnote 1).

ENDNOTES

1. The inflation measure utilised in this discussion is the CPI. The figures quoted here are calculated using an internationally standardised method which excludes housing, financial and insurance

services that may not be comparable with other ABS published CPI data.

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Inflation

LINKS TO OTHER DIMENSIONS OF PROGRESS

Inflation is linked with almost all other indicators of economic progress. It affects the distribution of income and wealth, and hence the decisions of consumers and businesses. It also affects the external competitiveness of the economy. If rises in the prices of domestically produced goods are small relative to rises in the prices of overseas goods, Australia's international competitiveness improves, provided that nominal exchange rates do not appreciate in response. Improvements in productivity and increased competition in goods and services markets are thought to have contributed to the low inflation rates of the 1990s.

RELATED PAGES

- National income
- Household economic wellbeing
- National wealth
- Competitiveness and openness
- Housing
- Productivity

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Inflation

INFLATION GLOSSARY

Consumer Price Index (CPI)

The Consumer Price Index (CPI) provides a general measure of change in prices of consumer goods and services purchased by Australian households. It measures quarterly changes in the price of a 'basket' of goods and services which account for a high proportion of expenditure by the CPI population group (i.e. capital city households). This 'basket' covers a wide range of goods and services, including items such as food, clothing, housing, health, transport, education and recreation to name a few. The CPI used for the purposes of this publication is the weighted average of eight capital cities.

Chain Price Index

An annually-reweighted Laspeyres price index. This can be thought of as a series of indexes measuring price change from a base year to quarters in the following year using current price values in the base year as weights, linked together to form a continuous time series.

Domestic Final Demand (DFD)

Domestic Final Demand is the aggregate of Final Consumption Expenditure and Gross Fixed Capital Formation.

Final Consumption Expenditure

Final Consumption Expenditure consists of expenditure on consumption goods and services, including imputed expenditure, incurred by general government, resident households and non-profit institutions serving households.

Gross Fixed Capital Formation

Gross Fixed Capital Formation is the value of producers' acquisitions, less disposals, of fixed assets during the period. Fixed assets are tangible or intangible assets produced as outputs from processes of production that are themselves used repeatedly in other processes of production for more than one year.

Inflation

A term commonly used to refer to changes in price levels. A rise in prices is called inflation, while a fall is called deflation.

The New Tax System (TNTS)

Package of changes to the taxation and social welfare system that commenced on 1 July 2000, and included the introduction of a goods and services tax (GST) and changes to business taxation.

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Inflation

INFLATION REFERENCES

Australian Bureau of Statistics 2009, Australian System of National Accounts, 2008-09, cat. no. 5204.0, ABS, Canberra

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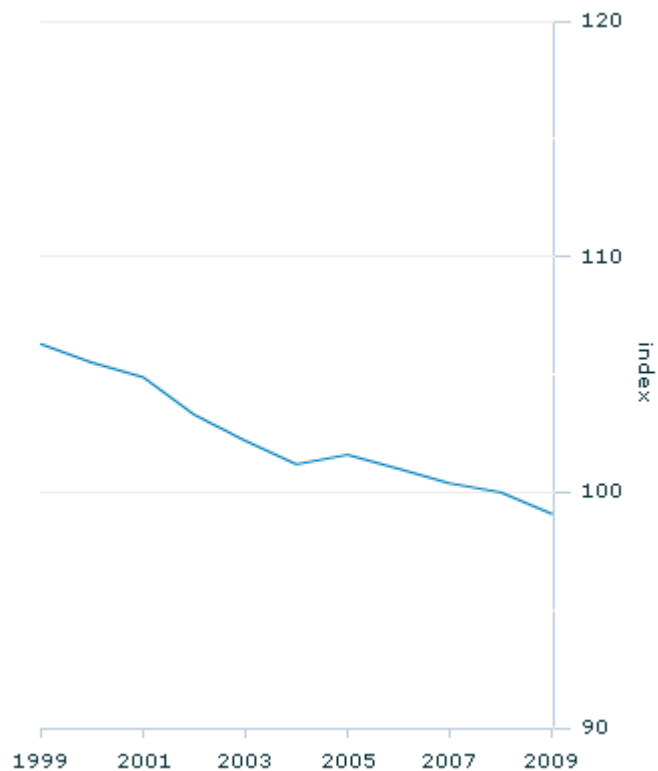
Competitiveness & openness

Competitiveness and openness, while not given headline status, has nevertheless been included as a supplementary dimension because of its relevance to whether life in Australia is getting better.

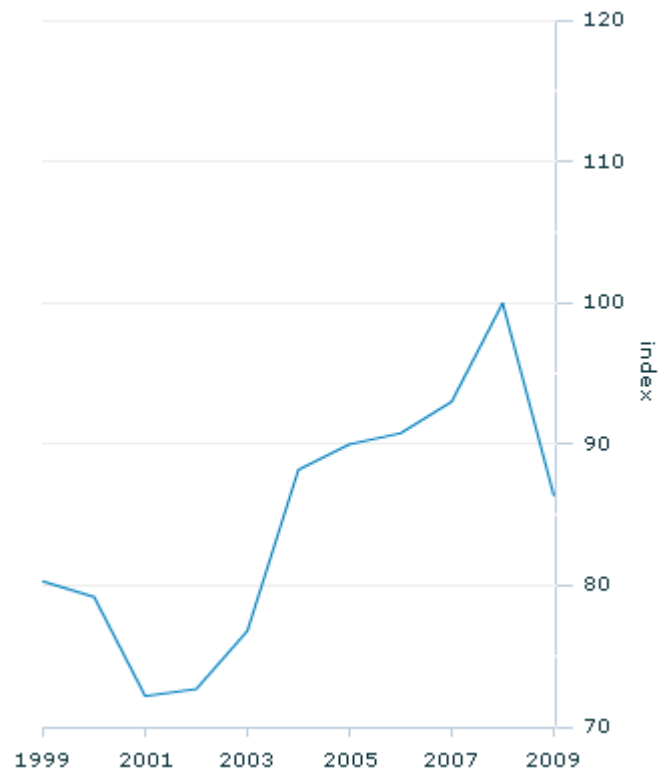
Over the previous decade there has been a moderate decrease in real unit labour costs and this is likely to have had a positive effect on Australia's international competitiveness.

During the same period, the trade weighted index (the value of the Australian dollar relative to the currencies of our major trading partners) decreased between 1999 and 2001, increased until 2008 and then decreased.

Real unit labour costs



Trade weighted index



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Competitiveness & openness

COMPETITIVENESS AND OPENNESS AND PROGRESS

Australia's international competitiveness has an impact on whether life in Australia is getting better, as it affects our international trade and, in turn, our national production, employment and income. A fall in our competitiveness implies that it is more difficult to find buyers in both foreign and domestic markets for Australian goods and services.

Openness (the interaction of Australia's economy with other economies) can provide benefits to Australians. For example, an increased openness to imports means that Australians have a wider range of goods and services to choose from and often at more competitive prices. Furthermore, increased international trade and investment flows may give businesses access to newer and more innovative technologies. This may lead to productivity improvements and greater efficiencies or innovation in Australia.

For a full list of definitions used in Competitiveness and openness, see the Competitiveness and openness glossary.

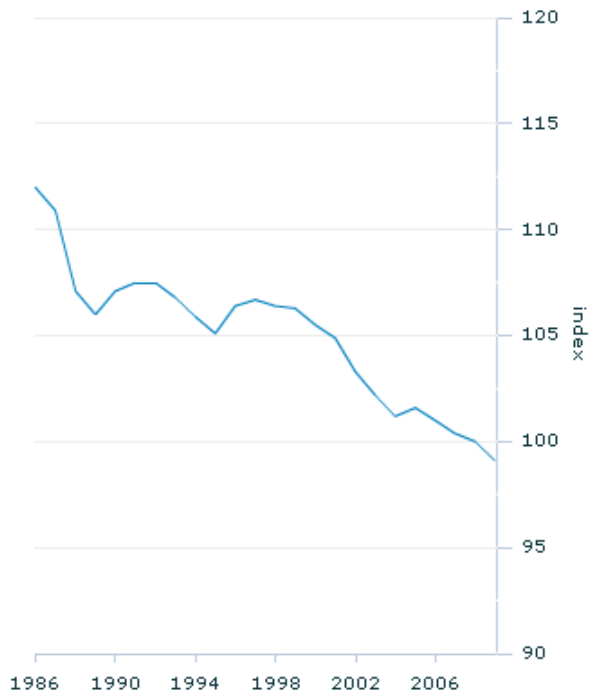
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Real unit labour costs(a)



Footnote(s): (a) Annual average, year ending 30 June. Base year is 2007-08.

Source(s): ABS Australian National Accounts: National Income, Expenditure and Product, Sep 2009 (cat. no. 5206.0)

COMPETITIVENESS

The competitiveness of a country's goods and services can be influenced by movements in Australian labour costs, labour productivity and the Australian dollar relative to other currencies.

Real unit labour costs measure the pace of real wage rises compared with the pace of productivity improvement. Australia's real unit labour costs decreased between 1986 and 2009. This decrease was due to productivity gains outstripping increases in real hourly labour costs and is likely to have had a positive effect on Australia's international competitiveness.

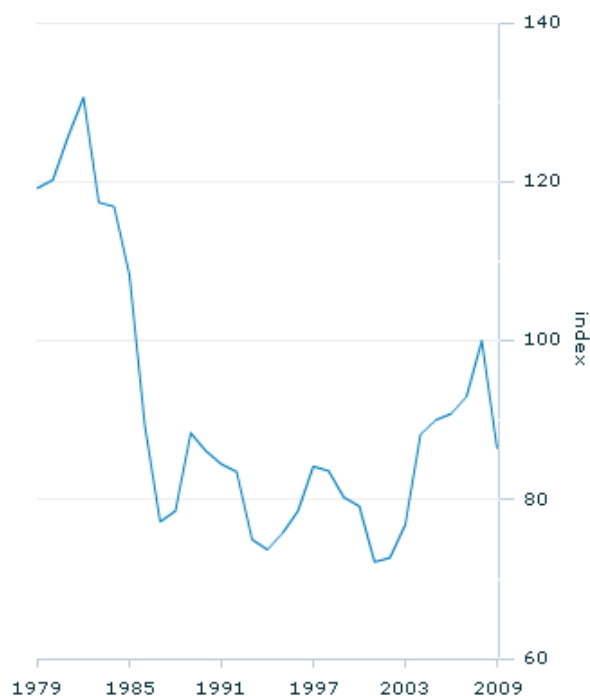
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Competitiveness & openness

Trade weighted index(a)(b)



Footnote(s): (a) Base year is 2007-08 and equals 100, year ending 30 June. The trade weighted index is re-weighted annually on 1 October and on special occasions as required. (b) Exchange rates and the trade weighted index are provided by the Reserve Bank of Australia in respect of each trading day. Period averages are derived from these rates.

Source(s): ABS Balance of Payments and International Investment Position, Australia, Sep 2009 (cat. no. 5302.0)

THE AUSTRALIAN DOLLAR

The trade weighted index measures change in the value of the Australian dollar relative to our major trading partners. All other things being equal, Australia becomes more competitive if the value of our dollar falls relative to the currencies of our competitors.

Over the past three decades there has been a fair degree of movement in the value of the Australian dollar against our main trading partners. The trade weighted index fluctuated from a peak of 131 in 1982 to a low of 72 in 2001, with the index at 86 in 2009.

New weights, which reflect the composition of Australia's two-way merchandise trade in 2008-09, are applied to the trade-weighted index in 2009-10. The Chinese renminbi had the highest weight (19%), followed by the Japanese yen (17%), the Euro (10%) and the United States dollar (9%). The weight of both the Chinese renminbi and the Japanese yen represented an increase of two percentage points from 2008-09, while the Euro and the United States dollar fell by one percentage point (RBA 2009).

The combined weight of the Asian-Pacific currencies, excluding the Japanese yen, increased to 53%, reflecting the growth of merchandise trade between Australia and the Asia Pacific region (Endnote 1) (RBA 2009).

In recent years the value of the Australian dollar has generally increased relative to the currencies of our major trading partners. In 2008-09, the Australian dollar was stronger against the value of the UK pound than it had been at any time in the previous 10 years (and represented a 16% rise since 1998-99). Between 1998-99 and 2008-09 the Australian dollar also rose 23% relative to the US dollar, despite falling

by 16% between 2007-08 and 2008-09 (ABS 2009).

ENDNOTES

1. Because the Japanese yen has such a large weighting in its own right, and because this weight has been declining recently, it is considered separately from the Asian-Pacific currencies.

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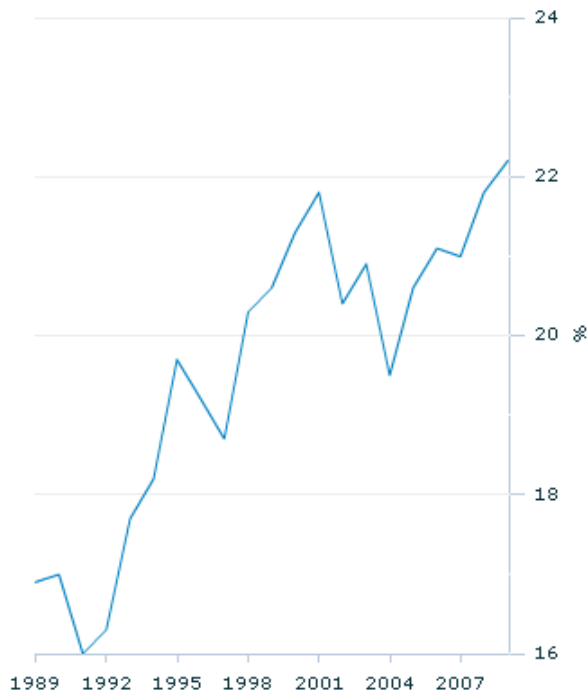
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Competitiveness & openness

Ratio of imports to GDP(a)



Footnote(s): (a) Year ending 30 June.

Source(s): ABS Balance of Payments and International Investment Position, Australia, September 2009 (cat. no. 5302.0)

OPENNESS

Openness can be measured by the relative level of overseas trade and investment flows into the national economy. It can also be assessed from the negotiation of free trade agreements or the barriers that a country places on trade and investment flows across its borders. Ideally an indicator of openness would measure both the size of, and barriers to, flows of trade and investment. However, there is currently no single indicator that measures barriers to investment.

The goods and services that other countries trade with Australians are indicators of openness. For example, Australia's openness to imports provides Australians with wider choices of goods and services. In this section openness is measured by the ratio of imports to GDP. Between the period 1989 to 2009 the ratio generally increased, ranging from a low of 16% in 1991 to a peak of 22% in 2009.

The increased openness of Australia's economy over this period was influenced by the lowering of barriers to the imports of goods and services and capital inflows, for example the decrease in the average tariff rates applied by Australia and an increase in multilateral, regional and bilateral trade negotiations. However, the ratio of imports to GDP is also affected by factors aside from the openness of the economy, for instance, fluctuations in the exchange rate of the Australian dollar and changes in world commodity prices.

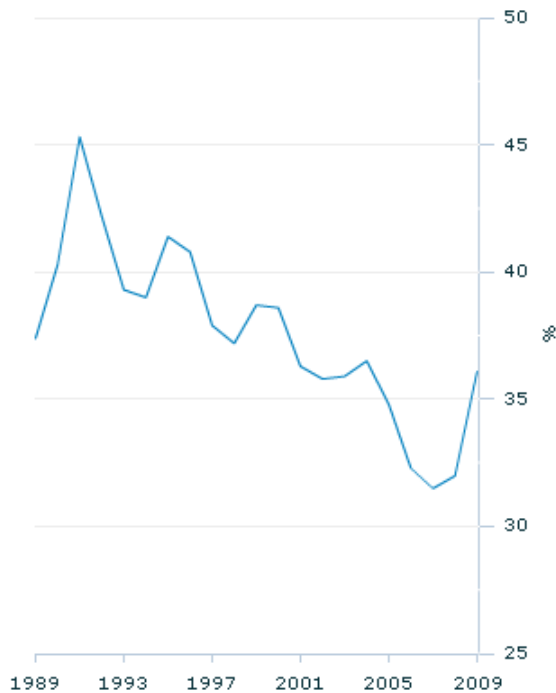
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Competitiveness & openness

Foreign ownership of Australian enterprises(a)



Footnote(s): (a) Annual average, year ending 30 June.

Source(s): ABS Australian National Accounts: Financial Accounts, June 2009 (cat. no. 5232.0)

FOREIGN INVESTMENT

Investment flows into and out of Australia are another important measure of openness. Outward investment can build up Australia's income-generating assets abroad, while inward investment can provide opportunities for businesses to access new technologies and management skills, as well as fund capital formation.

The proportion of foreign ownership in Australian enterprises is used as one indicator to measure this aspect of openness. Over the last couple of decades foreign ownership of Australian enterprises has ranged from a peak of 45% in 1991 to a low of 32% between 2006 and 2008. In 2009, this had risen to 36%. The volatility over this period is also an indicator of openness, as it reflects the ease with which equity can be invested or withdrawn. This openness may be reflective of the deregulation of the financial system in the mid 1980s.

Foreign residents and companies can invest funds into the Australian economy through direct investment, portfolio investment and other investment (see glossary). In 2008-09, portfolio investment accounted for 53% of total foreign liabilities, and direct investment made up another 25% (ABS 2009).

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Competitiveness & openness

LINKS TO OTHER DIMENSIONS OF PROGRESS

Enhanced international competitiveness in both foreign and domestic markets tends to improve Australia's international trade balance and increase national income. Reduced rates of inflation relative to Australia's trading partners and productivity improvements can enhance Australia's international competitiveness. Improvements in productivity can also be associated with greater openness to foreign investment.

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Competitiveness & openness

COMPETITIVENESS AND OPENNESS GLOSSARY

Direct investment

Is when a foreign investor has an equity interest of 10% or more in an Australian enterprise, and so has influence over its operations.

Foreign ownership of Australian enterprise

Total foreign liabilities and equity as a proportion of total listed and unlisted Australian enterprises, excluding unlisted equity of national public non-financial corporations, state and local public non-financial corporations and central bank.

Gross domestic product (GDP)

Gross domestic product (GDP) is the total market value of goods and services produced in Australia within a given period after deducting the cost of goods and services used up in the process of production but before deducting allowances for the consumption of fixed capital. It is defined 'at market prices'. It is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services.

Imports

Commodities and other goods or services purchased by residents from non-residents.

Other investment

Foreign investment transactions that are not included as direct or portfolio investment, such as trade credits.

Portfolio investment

Refers to equity and debt transactions which, unlike direct investment, do not offer the investor any influence over the operation of the enterprise.

Ratio of imports to GDP

The ratio of goods and services debits to GDP.

Real unit labour costs

The pace of real wage rises compared with the pace of productivity improvement.

Trade weighted index (TWI)

The TWI is an indicator of movements in the average value of the Australian dollar. The TWI is calculated by the Reserve Bank of Australia as a geometric average of a basket of currencies that are representative of Australia's trading patterns. The currencies included in the calculation of the TWI make up at least 90% of total merchandise trade with Australia.

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COMPETITIVENESS AND OPENNESS REFERENCES

Australian Bureau of Statistics, 2009, Balance of Payments and International Investment Position, Australia, Sep 2009, cat. no. 5302.0, ABS, Canberra.

Reserve Bank of Australia, 2009, Trade Weighted Index, RBA, Sydney, <www.rba.gov.au>.

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Australia's environment is fundamental to the quality of life and sense of wellbeing of Australians, as well as providing key inputs to the economy. Until recently there has been a tendency to take clean water, clean air and natural attractions such as the Great Barrier Reef, for granted. However increasing population and economic pressures have caused many people to be increasingly concerned about the state of both the Australian and wider global environment.

In this commentary, progress refers to a reduction in threats to the environment and improvements in the health of our ecosystems.

The headline dimensions that help Australians assess whether our environment has improved include:

- Biodiversity
- Land
- Inland waters
- Oceans and estuaries
- Atmosphere
- Waste

The presentation of these dimensions is largely consistent with other major environmental reports, most notably the State of the Environment report produced five yearly under the Environment Protection and Biodiversity Conservation Act, 1999 (EPBC Act).

Land, biodiversity, water and air are integral parts of Australia's environment and are inextricably linked. For example, changes in the health of inland waters, such as reduced river flows, can affect biodiversity, while changes in land use can affect inland waters, biodiversity and estuaries.

Not only do Australia's plants, animals and ecosystems sustain life, but they are also key contributors to economic growth as inputs to production. For example, the use of water for agricultural production.

The overlap between environment dimensions means that indicators in this publication will often relate to more than one dimension. For example, annual area of land cleared is discussed under the dimension of land, but with its relationship to loss of habitat and loss of carbon sink it could also be discussed under either the Biodiversity or Atmosphere dimensions.

Biodiversity

Our plants, animals and ecosystems bring important economic and social benefits and Australia's unique environmental assets are recognised globally. Native vegetation has cultural, aesthetic and recreational importance to many Australians. Most importantly, the ways in which organisms interact with each other and their environment are important to human survival: we rely on ecosystems that function properly for clean air and water and healthy soil.

Land

Soil resources are an important natural asset. Degraded soil affects agricultural productivity, wildlife habitat and water quality.

Water

Water is fundamental to the survival of people and other organisms. Apart from drinking water, much of our economy (agriculture in particular) relies on water. The condition of freshwater ecosystems has a critical impact on the wider environment, especially for sustaining native wildlife and vegetation.

Estuaries and oceans

Our beaches, estuaries and wider marine ecosystems play an important role in Australian life. The oceans

support a vast array of marine life and many of our marine ecosystems are globally important, such as the Great Barrier Reef which is the largest coral reef system in the world.

The atmosphere

The atmosphere surrounding our planet plays a role in supporting life on earth: oxygen is required to sustain living animals; a layer of ozone shields us from harmful ultraviolet rays from the sun; and greenhouse gases, predominantly carbon dioxide, maintain the surface temperature of the earth at levels that can sustain life. Poor air quality has a range of negative impacts: it can cause health problems, damage infrastructure, reduce crop yields and harm plants and animals. Greenhouse gases and air pollution occur both naturally and as a result of human activities.

Waste

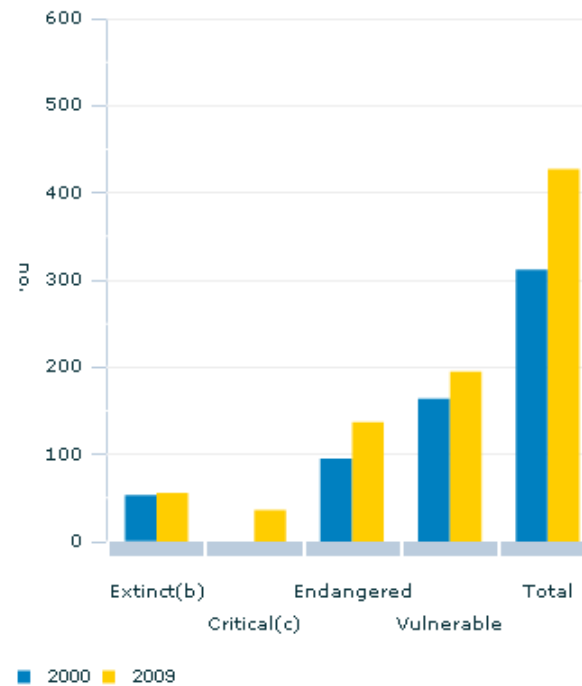
Waste is a by-product of many human activities. Many economic activities generate waste - solid, liquid and gaseous wastes are a by-product of many productive processes, and goods (or their packages) may be discarded by consumers. Waste can be expensive to deal with, can have a damaging impact on the environment, and can affect peoples health and wellbeing.

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Biodiversity



Threatened fauna species(a)

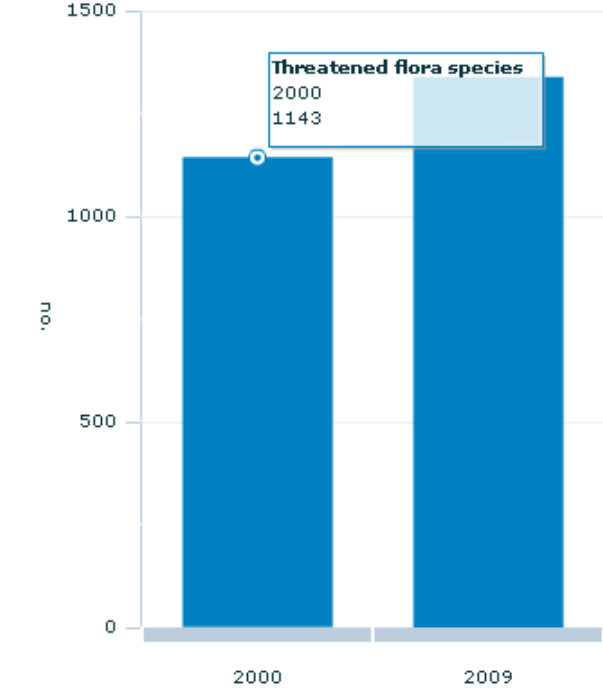
Over the past decade, there has been an increase in the number of threatened fauna species from 312 in 2000 to 427 in 2009.

Of the list of threatened fauna species in 2009, just under half (46%) were listed as vulnerable, around two-fifths (41%) were listed as endangered or critically endangered, and just over one in ten (13%) were listed as extinct.

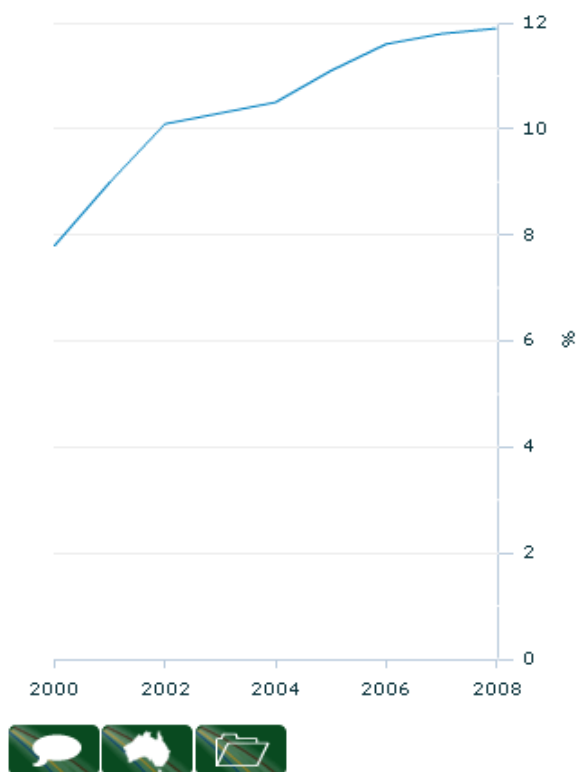
(a) The conservation status category, 'Conservation dependent' is not shown as this category was not used until December 2006 and only had three species in 2009. (b) Includes 'Extinct in the wild.' (c) 'Critically endangered'. This conservation status category was not used until October 2001.



Threatened flora species



Protected terrestrial areas



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BIODIVERSITY AND PROGRESS

Biodiversity (or biological diversity) is the variety of all life forms on earth - the different plants, animals and micro-organisms, the genes they contain, and the ecosystems they form.

Biodiversity is essential to the wellbeing of Australia and Australians. Native plants, animals and other organisms contribute to a healthy environment through the maintenance of clean air and water, and healthy soils. They also provide significant economic benefits, for example through tourism, agriculture and a range of cultural and recreational services.

Australia's biodiversity is unique and globally significant, with Australia being home to many endemic plants and animals, that is, they are found nowhere else in the world. Australia is recognised as one of only 17 'mega-diverse' countries, with ecosystems of exceptional variety and uniqueness. This group of mega-diverse countries covers less than 10% of the global surface, but supports more than 70% of the earth's biological diversity.

No single indicator can encapsulate all Australian biodiversity, that is, the abundance and diversity of all micro-organisms, plants and animals, the genes they contain and the ecosystems they form. Instead we focus on the number of threatened fauna species as this provides an indication of the threat to biodiversity, and how it has been changing over time.

Ongoing research means that our knowledge of, and ability to assess species populations has improved. This means that the Environment Protection and Biodiversity Conservation (EPBC) listing of threatened species is becoming more comprehensive as time goes on. However, it can also mean that increases in the number of species listed as threatened are due to improved information and field investigations, rather than actual changes in overall biodiversity. Nevertheless, species listings are among the best information available to measure progress or regress in our biodiversity.

Threatened fauna species is presented as the headline indicator, as most of the fauna (eg. mammals, birds, reptiles and amphibians) have been relatively well studied and hence there is better data. However, two closely related measures are included as supplementary progress indicators: threatened flora species and threatened ecological communities. A final indicator is also presented to show the areas of Australia that are protected.

For a full list of definitions, please see the Biodiversity glossary.

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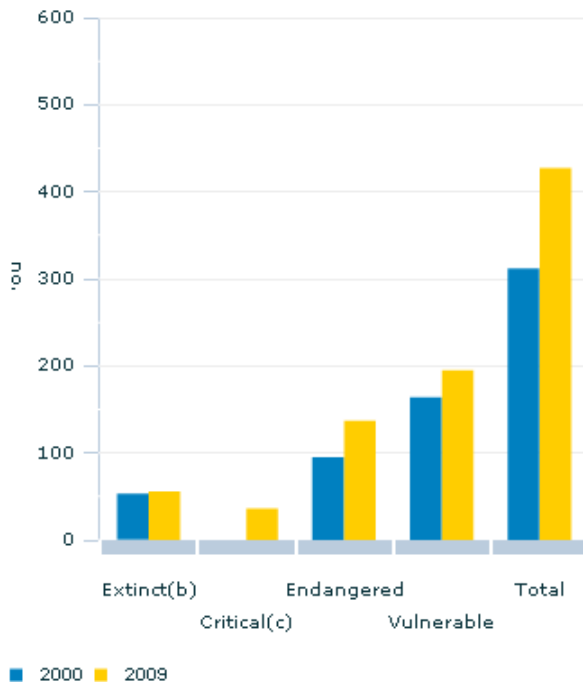
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Biodiversity

Threatened fauna species(a)



Footnote(s): (a) The conservation status category, 'Conservation dependent' is not shown as this category was not used until December 2006 and only had three species in 2009. (b) Includes 'Extinct in the wild.' (c) 'Critically endangered'. This conservation status category was not used until October 2001.

Source(s): Department of the Environment, Water, Heritage and the Arts, EPBC Act List of Threatened Fauna

THREATENED FAUNA

Threatened fauna are a small part of overall biodiversity, yet an increase in the endangered status of listed species threatens ecological processes and can point to a wider decline in biodiversity. This provides an indication of the magnitude of decline in overall biodiversity and how it is changing over time.

Since 2000, when the EPBC Act was introduced, the total number of listed threatened fauna species has increased by 37%, rising from 312 in 2000 to 427 in 2009. These increases may reflect taxonomic revisions and improved reporting in conservation status and do not necessarily mean a change in the conservation status of the fauna.

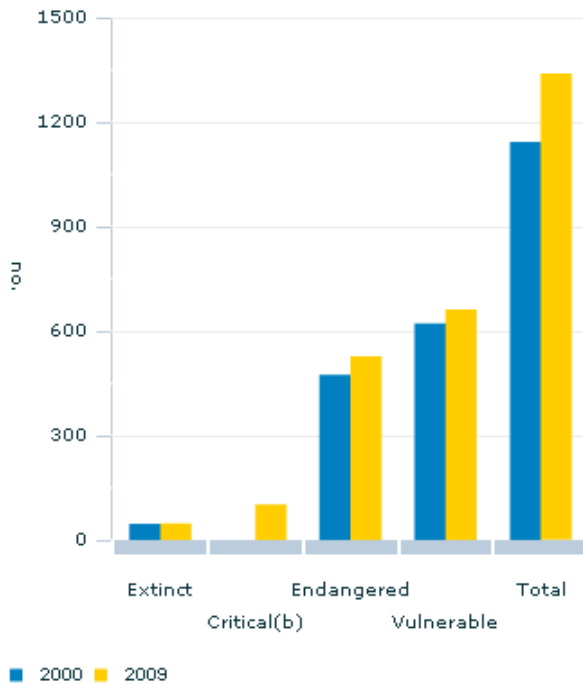
Of the list of threatened fauna species in 2009, just under half (46%) were listed as vulnerable, around two-fifths (41%) were listed as endangered or critically endangered, and just over one in ten (13%) were listed as extinct. The EPBC Act notes that species listed as either Extinct in the wild, Critically endangered, Endangered or Vulnerable are matters of national environmental significance.

Birds and mammals accounted for over half (54%) of the vulnerable, endangered or critically endangered species in 2009, while close to half of the extinct species were mammals (48%) and a further 41% were birds.

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Threatened flora species(a)



Footnote(s): (a) The conservation status categories 'Extinct in the wild' and 'Conservation dependent' are not shown since no species fell into these categories in 2000 and 2009. (b) 'Critically endangered'. This conservation status category was not used until October 2001.

Source(s): Department of the Environment, Water, Heritage and the Arts, EPBC Act List of Threatened Flora

THREATENED FLORA

An increase in threatened flora species may endanger ecological processes and also indicate a wider decline in biodiversity.

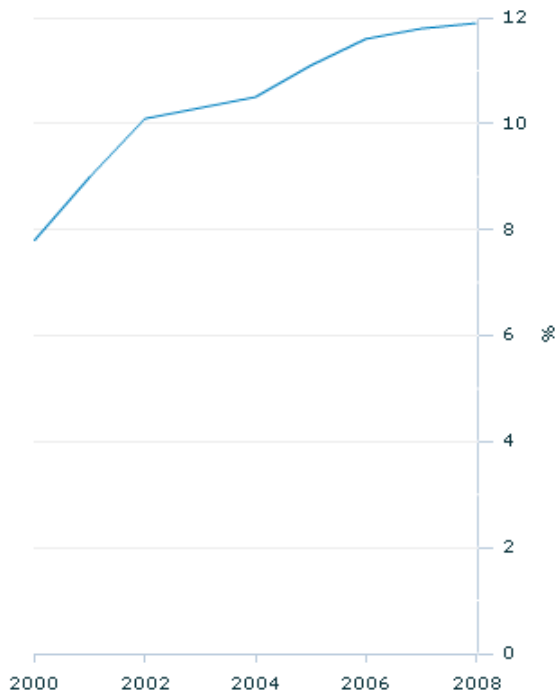
Since 2000, the total number of listed threatened flora has increased by 17%, rising from 1,143 in 2000 to 1,339 in 2009. However, changes in the data need to be treated with caution. Species can be removed or added because of improved knowledge, new species discovery, or the rediscovery of those thought to be extinct.

The increase in total threatened flora from 2000 to 2009 was influenced by the number of flora listed as 'endangered' (increasing by 11%), the number of flora listed as 'vulnerable' (increasing by 6%) and the introduction of a new category 'critically endangered', which was first populated in October 2001.

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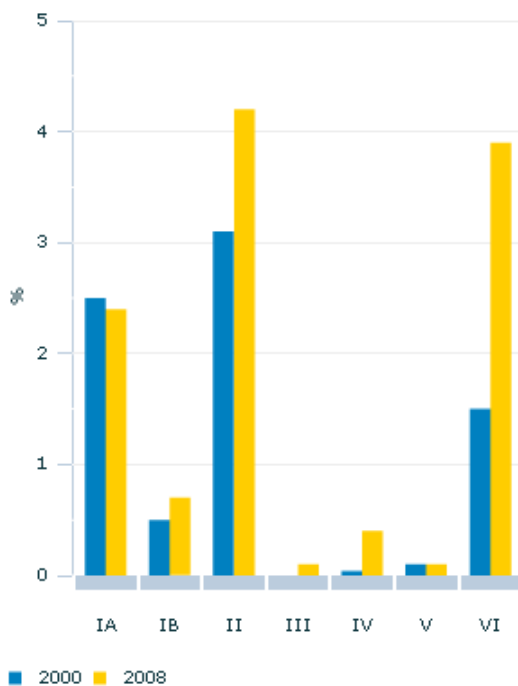
Protected terrestrial areas(a)(b)



Footnote(s): (a) Proportion of Australia's total terrestrial area. (b) Data has been interpolated for 2001, 2003, 2005 and 2007.

Source(s): Department of the Environment, Water, Heritage and the Arts, Protected Area Information, last viewed April 2010

Protected terrestrial areas - by IUCN category(a)(b)



Footnote(s): (a) Proportion of Australia's total terrestrial area. (b) See Biodiversity glossary

Source(s): Department of the Environment, Water, Heritage and the Arts, Protected Area Information, last viewed April 2010

PROTECTED AREAS

National parks and protected areas provide habitat and food for native flora and fauna. Species and communities of species benefit from secure areas in which to forage and breed, and enhance their ability to survive in the long term. National parks and protected areas also allow for the preservation of an area with natural features of scientific or recreational value.

In 2008, Australia's national parks and other terrestrial protected areas covered 12% of Australia's total area. Between 2000 and 2008, protected areas have increased from 61 million hectares to 91 million hectares.

Australia uses the International Union for the Conservation of Nature (IUCN) protected area classification scheme, which groups protected land into seven categories. Managed resource protected areas (Category VI) showed the greatest increase between 2000 and 2008, rising from 11.7 million hectares to 30 million hectares. National parks (Category II) also showed a substantial increase over the same period, rising from 23.9 million hectares to 32.5 million hectares. These two categories now account for around 8% of Australia's land area.

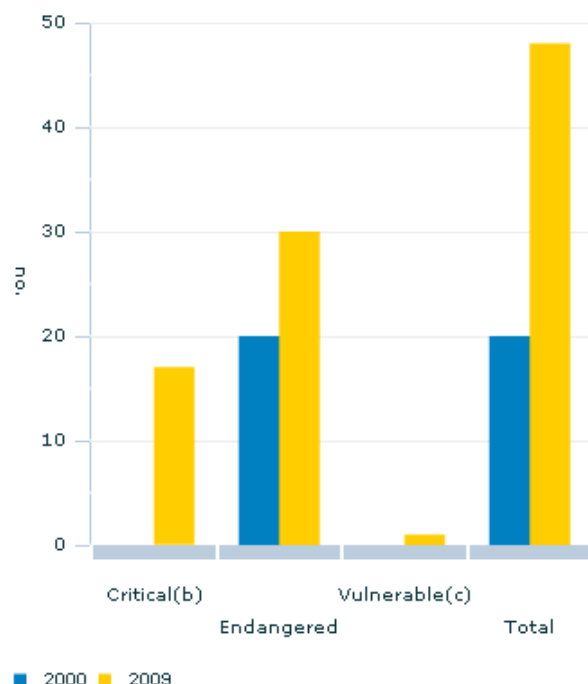
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Threatened ecological communities(a)



Footnote(s): (a) Threatened ecological communities do not include the categories: 'Conservation dependent', 'Extinct in the wild' and 'Extinct'. (b) 'Critically endangered'. This conservation category was not used until after 2001. (c) The conservation status category 'Vulnerable' was not used until after 2001.

Source(s): Department of the Environment, Water, Heritage and the Arts, EPBC Act List of Threatened Ecological Communities, last viewed April 2010

THREATENED ECOLOGICAL COMMUNITIES

While Australian fauna and flora species have been relatively well studied, there remains a substantial gap in knowledge about some types of species. For example, Australia is home to around 570,000 animal and plant species, of which only 150,000 have been scientifically identified (Chapman 2009).

There is provision under the EPBC Act for scientific committees to examine whether ecological communities are considered threatened with extinction and are therefore recorded on a list. At this point in time, however, research and conservation effort has focused on the protection of individual species rather than whole ecological communities. Therefore, listings of ecological communities are likely to be less complete than the listings for individual species.

Over the past decade, the number of threatened ecological communities has more than doubled, increasing from 20 in 2000 to 48 in 2009. This increase may reflect improved information and field investigations and does not necessarily represent a change in the conservation status of all ecological communities. The increase may also represent more resources being used to assess and categorise communities. In future, once Australia has developed more knowledge on ecological communities, this measure of threatened ecological communities may be more reflective of Australia's biodiversity. However, the listed communities are not necessarily the only ones in danger of extinction. To be listed, a community must undergo significant investigation and survey work as part of a scientific committee assessment, so it is likely that other communities not listed here may also be under threat.

Of the 48 threatened ecological communities listed in 2009, 17 were critically endangered, 30 were endangered and one was classified as vulnerable.

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LINKS TO OTHER DIMENSIONS OF PROGRESS

Land, inland waters, oceans and estuaries, waste and atmosphere all relate to biodiversity and progress. At an economic level, biodiversity generates income and employment in Australia, for example, through tourism. On the other hand, economic activity (particularly land clearing) has been a major reason for the decline of many species.

See also the sections linked below.

RELATED PAGES

- [Land](#)
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- [Oceans and estuaries](#)
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BIODIVERSITY GLOSSARY

Biodiversity

The variety of all life forms on earth – the different plants, animals and micro-organisms, the genes they contain and the ecosystems which they form part of.

Conservation Status

The 'Environment Protection and Biodiversity Act 1999' (Cwlth) classifies listed threatened species (fauna or flora) into six categories: extinct; extinct in the wild; critically endangered; endangered; vulnerable; and conservation dependent. The Act also classifies listed threatened communities into three categories: critically endangered; endangered; and vulnerable.

Critically endangered

Strong evidence that a species faces an extremely high risk of extinction in the immediate future.

Ecological communities

The definition of an ecological community in the EPBC Act is as follows: 'an assemblage of native species that: (a) inhabits a particular area in nature; and (b) meets the additional criteria specified in the regulations (if any) made for the purposes of this definition'.

Endangered

Strong evidence that a species faces a very high risk of extinction in the near future.

Endemic species

Native to a particular area and found nowhere else.

Environment Protection and Biodiversity Conservation (EPBC) Act

The EPBC Act provides a framework for protection of the Australian environment, including biodiversity and its natural and culturally significant places. Enacted on 17 July 2000, it established a range of processes to help protect and promote the recovery of threatened species and ecological communities, and preserve significant places from decline.

Extinct

There is no reasonable doubt that the last member of a species has died.

Fauna

The entire animal life of a site or region.

Flora

The entire plant life of a site or region.

International Union for the Conservation of Nature (IUCN) protected area classification scheme

Category IA – Strict Nature Reserve: Protected area managed mainly for science.

Category IB – Wilderness Area: Protected area managed mainly for wilderness protection.

Category II – National Park: Protected area managed mainly for ecosystem protection and recreation.

Category III – Natural Monument: Protected area managed for conservation of specific natural features.
Category IV – Habitat/Species Management Area: Protected area managed mainly for conservation through management intervention.
Category V – Protected Landscape/Seascape: Protected area managed mainly for landscape/seascape conservation and recreation.
Category VI – Managed Resource Protected Areas: Protected area managed mainly for the sustainable use of natural ecosystems.

Protected areas

An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity and of natural and associated cultural resources, and managed through legal or other effective means. It is classified as protected under the International Union for the Conservation of Nature (IUCN) protected area classification scheme.

Terrestrial area

Australia's land.

Vulnerable

Strong evidence that a species faces a high risk of extinction in the medium term.

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BIODIVERSITY REFERENCES

Chapman, Arthur D 2009, Numbers of Living Species in Australia and in the World, 2nd ed, Department of the Environment, Water Heritage and the Arts, Canberra.

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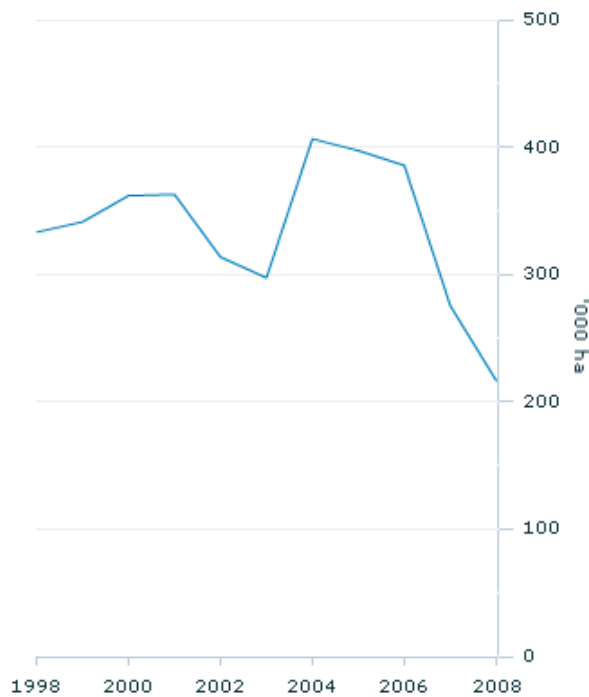
Land

Ideally, the headline indicator might consider the area of native vegetation cover in Australia, or the extent and intensity of land clearance and modification. However, few accurate time series data are available. As a result, there is currently no headline indicator for the land dimension that adequately summarises landscapes, biodiversity and ecosystem services. There are, however, two supplementary indicators which provide some insight into aspects of our land, and whether these aspects are improving over time.

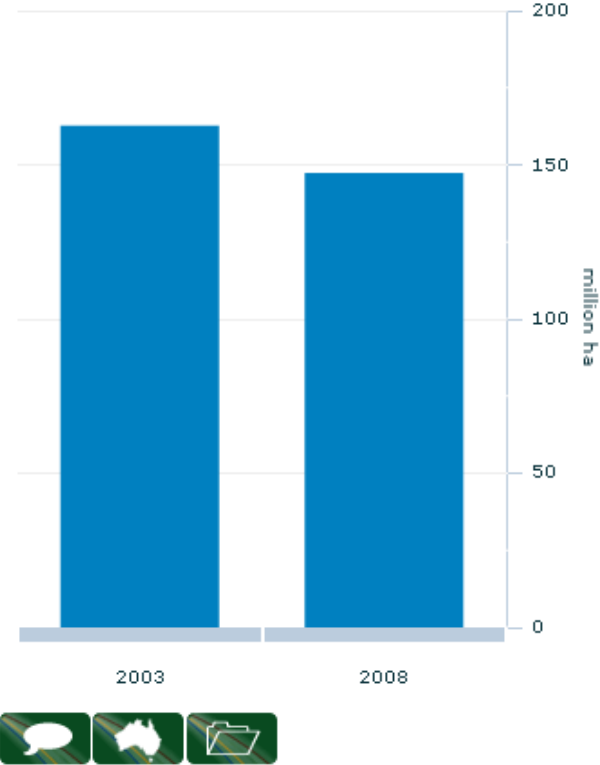
Supplementary indicators show that:

- In 1998, there were 333,400 hectares of forest land cleared for the first time, or land recleared, compared to 216,500 hectares in 2008. The amount of forest land cleared during this period peaked in 2004 at 406,700 hectares.
- Australia's native forest area has decreased from 163 million hectares in 2003 to 147 million hectares in 2008.

Land clearance



Native forest area



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LAND AND PROGRESS

The land on which Australians live is essential for their wellbeing. It provides the foundation for animals and plants to flourish, with functioning ecosystems providing clean water, clean air and healthy soils as well as maintaining our unique biological diversity.

Altering land from its natural state almost always results in adverse affects on biodiversity, soil and water quality, and assists in the spread of weeds, feral pests and diseases. If persistent, these changes can lead to environmental problems and rapid deterioration of both aquatic and terrestrial ecosystems, which can also have economic and social impacts (ABS 2010).

Australia's population continues to increase, both in numbers and in affluence, putting pressure on our land and its resources. In the last 200 years, vast areas of native vegetation which provide a protective cover for the land has been removed or degraded in many areas due to urbanisation, agriculture, mining, pastoralism and infrastructure development. Land may be cleared for many reasons, particularly agriculture and urban development. Land provides economic benefits through employment in industries such as agriculture, mining and tourism, while for some people it provides a place to get away and relax.

Ideally the headline indicator for land might consider the area of native vegetation cover in Australia, or the extent and intensity of land clearance and modification. However, few accurate time series data are available. As a result, there is currently no headline indicator for the land dimension that adequately summarises landscapes, biodiversity and ecosystem services.

Supplementary progress indicators are presented which show the annual area of forest conversion and land recleared, and changes in native forest areas.

Further information has also been provided to show how we use our land and the effects that humans have had on the land, including plantation forests, dryland salinity, introduction of weeds and invasive species. Although the damaging consequences of most human activities are unintentional, they have the capacity to threaten the natural systems essential to life. There is increasing effort to improve management practices so that pressures on the land are reduced and declines in biodiversity, soil and water quality are reversed (DEWHA 2008).

For a full list of definitions, see the Land glossary.

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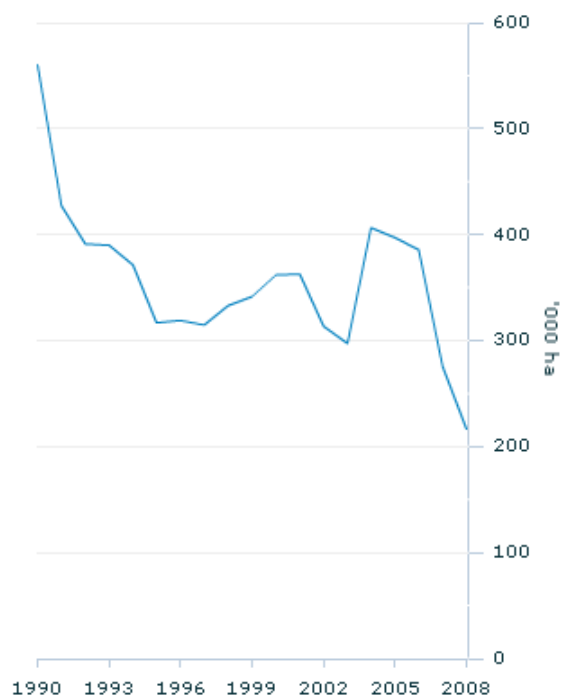
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Land

Annual area of forest conversion and reclearing



Source(s): Department of Climate Change and Energy Efficiency, National Inventory Report 2008, Volume 2

LAND CLEARING

Land clearing destroys plants and local ecosystems, and removes the food and habitats on which native species rely. In addition, land clearing helps weeds and invasive species to spread, affects greenhouse gas emissions and can lead to soil degradation, including erosion or salinity, which in turn can harm water quality. While land clearing is of significant threat to terrestrial biodiversity, it can also provide economic benefits, such as developing new areas for agriculture, and helps to meet the needs of a growing population. Forest conversion is land cleared for the first time and reclearing is the clearing of land previously cleared.

Since 1990, the annual quantity of forest land conversion and reclearing has decreased from 561,000 hectares (ha) in 1990 to 216,500 hectares in 2008. However, these figures do not distinguish between the clearance of native or non-native vegetation (ABS 2010), and it is the clearance of native vegetation that is a significant threat to terrestrial biodiversity.

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NATIVE FORESTS

Forests act as carbon sinks by absorbing greenhouse gases. They are also used for many other purposes including recreation, biodiversity conservation, timber harvesting, water catchment protection and honey production. All of these uses have impacts on the natural landscape, but the harmful impacts of the extraction of timber has attracted the most attention. Conversely, the forestry industry and associated wood and paper manufacturing are a source of income and work across Australia.

In 2008, there were an estimated 149 million hectares of forest in Australia, covering 19% of the continent (BRS 2010b). Most of Australia's forest area is deemed native forest (147 million hectares in 2008). Between 2003 and 2008, there was a reduction in native forest area of just over 15 million hectares (or 9%), with eucalypt forest reducing by 10.6 million hectares (8%). This reduction is a reflection of Australia's improved ability to estimate its forest content with high resolution, remotely sensed data and improved forest typing methods. These changes largely explain the difference in area of native forest over this time, and little of the difference is due to real forest loss (BRS 2008).

Australia's native forest areas are dominated by eucalypt (79% in 2008), followed by acacia (7%) and melaleuca (5%).

Old growth forests are ecologically mature forests where effects of past disturbances are now negligible. The total area of old growth forest in Australia is largely unknown. In Regional Forest Agreements, areas where assessments of old forest growth were undertaken indicate that more than 5.0 million hectares of the 23.0 million hectares of native forest (or 22%) are classified as old growth forest. About 73% of these old growth forests are in nature conservation reserves, with some of the remainder available for timber production (BRS 2010b).

Native forest area

Native forest area map of Australia, by forest type

Source: Bureau of Rural Sciences, Australian Forest Profiles 2008.

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AUSTRALIA'S LAND AND VEGETATION

The ways in which Australia's land is used can impact on the environment. Some types of land use (such as crop growing or urban development) depend on land clearance. Other uses of land do not depend on land clearance, yet still have a significant impact on Australia's environment.

The loss of native vegetation and habitat is a major threat to Australia's environment. Various species of animal and plant are under threat not only due to land clearing and changes in the surrounding environment, but also because of invasive species which threaten their habitat.

Forests are significant for biodiversity conservation. Forests maintain habitats for native animals and plants and are also important for improving water quality, mitigating dryland salinity and contributing to carbon sequestration through photosynthesis.

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LAND USE

Almost two-thirds (63%) of land in Australia has been modified for human use, primarily grazing on natural vegetation (BRS 2010a). Clearing of native vegetation continues to occur for agriculture, plantation forestry, and urban development (DEWHA 2006a).

The different types of land use vary in the degree of pressure that they place on the environment. Generally environmental impacts increase as land use intensifies: from grazing of natural vegetation, to dryland agriculture and plantations, and irrigated agriculture. Intensive use, such as that associated with mining and urban development, involve the greatest level of modification and these generally have the greatest environmental impact.

Intensive uses account for less than 1% of total land use, however the impact is often highly concentrated. For example, the environmental impacts of urban development are a major concern in coastal areas where growing populations are increasing the demand for housing near the coast (DEWHA 2006a).

Grazing accounts for just over half of all land use. Environmental issues associated with sheep and cattle grazing include habitat loss, surface soil loss, salinity, and soil and water quality issues.

Land classified as "conservation and natural environments" account for just over a third of Australia's area. About 12% is formally protected in reserves or protected areas (ABS 2010).

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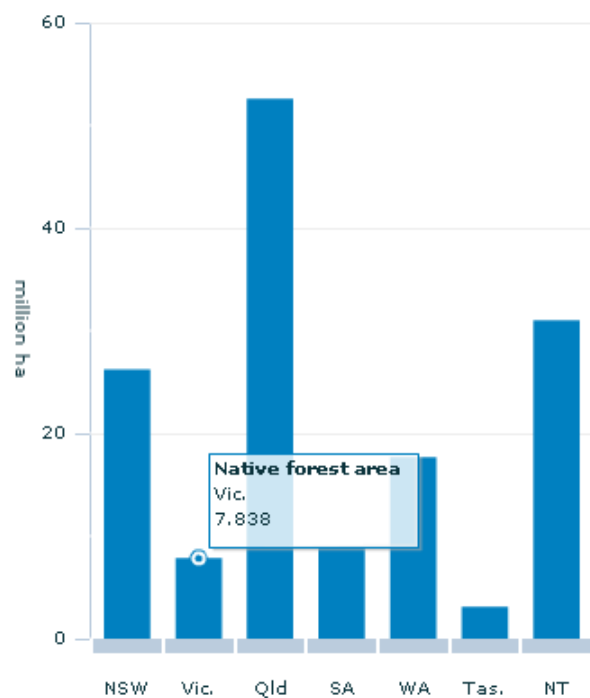
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Land

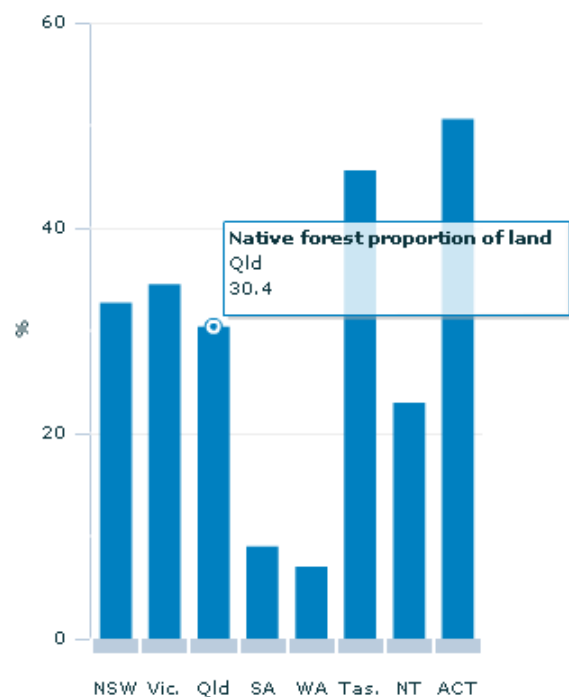
Native forest area(a) - June 2006



Footnote(s): (a) Total native forest area of the ACT is 123,000 hectares.

Source(s): Bureau of Rural Sciences, Australia's State of the Forests Report, 2008

Native forest area as a proportion of land(a) - June 2006



Footnote(s): (a) Proportion of total land area in the relevant state or territory.

Source(s): Bureau of Rural Sciences, Australia's State of the Forests Report, 2008

STATE AND TERRITORY FORESTS

Queensland, the Northern Territory and New South Wales together accounted for three-quarters (74%) of the 147.4 million hectares (ha) of native forests in Australia in 2006.

While the Australian Capital Territory and Tasmania are small in area, around half of their area is designated as native forest (51% and 46% respectively).

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PLANTATION FORESTS

Plantation forests are an important source of timber, and currently supply about two-thirds of the logs for Australia's domestic timber requirements and exports. When planted on land that was previously cleared, plantations can bring environmental benefits such as lowering the water table (and hence reducing salinity), reducing erosion, providing wind shelters, or acting as carbon sinks to offset carbon dioxide emissions. However, plantations (whether exotic or native) have vastly simplified ecosystems. They contain far fewer species of plants and animals than forests that have matured over thousands of years. Plantations can also be more vulnerable to pests and disease, which can then spread and increase the risk of exotic species invading nearby areas of natural forest.

In 2009, Australia had more than 2 million hectares of timber plantations, approximately 1.5% of Australia's total forested area. Of this total, 50% were softwood species (1.0 million hectares), 49% were hardwood species (991,000 hectares) and less than 1% were other plantations (9,000 hectares). Australia's plantation area has been expanding steadily for several years. An average of 70,000 hectares of new plantations were established in each of the four years to 2009 (BRS 2010b).

About 28.5 million cubic metres of logs were harvested in 2008, of which about 68% were from plantations (BRS 2010b). The remainder were from native forests.

Plantation forest area

Forest type	2005 (^{'000}) hectares	2009 (^{'000}) hectares
Hardwood plantations	740	991
Softwood plantations	990	1 020
Other plantations	10	9
<i>Total plantation forests</i>	<i>1 740</i>	<i>2 020</i>
Total forest (a)	164 410	149 417

(a) Includes native forests for 2003 and 2008 respectively.

Sources: Bureau of Rural Sciences, Australia's Forests at a Glance, 2007 and 2010

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SALINITY

Australia's soils are susceptible to degradation by agricultural activities. One of the most significant causes of soil degradation in Australia is salinity, which poses a serious threat to native species, ecological communities and functioning ecosystems (ANZECC 2001). Salinity occurs when the water table rises, bringing natural salts to the surface; in sufficient quantity, these salts become toxic to most plants.

Salinity has been caused by extensive land clearing in Australia, predominantly for agricultural purposes. European farming practices, which replaced trees or other deep-rooted native vegetation with shallow-rooted crops and pastures that use less water, has resulted in rising water tables which can cause dryland salinity. Dryland salinity is more difficult to remedy than irrigation salinity which is well understood and managed. Land clearance can also lead to soil erosion and, when it results in a changing water balance, to dryland salinity. Soil erosion, which is also linked to overgrazing from livestock and invasive species such as rabbits and goats, can also cause fine particle air pollution.

In 2000, 5.7 million hectares of Australia were assessed as having a high potential to develop salinity. Predictions indicate that unless effective solutions are implemented, the area affected could increase to 17 million hectares by 2050, most of which is agricultural land (more than 11 million hectares) (NLWRA 2001). In 2002, about 20,000 farms and 2 million hectares of agricultural land showed actual signs of salinity (ABS 2002). For many farms, salinity has meant loss of productivity and income.

There are also many off-farm impacts of salinity, the most significant of which appears to be the salinisation of rivers which affects drinking and irrigation water (for example in Western Australia some surface water is already too saline for domestic use) (NLWRA 2001). Other impacts are the damage to infrastructure such as road pavement, bitumen, pipelines and concrete. In 2000, some 1,600 km of rail, 19,900 km of roads, and 68 towns were at risk of damage due to salinity.

Salinity threatens biodiversity through loss of habitat on land and in water. Areas of remnant and rehabilitated native vegetation are under threat in Western Australia, South Australia, New South Wales and Victoria (NLWRA 2001). In the Western Australian wheat-belt, salinity has caused a 50% decrease in the numbers of wetland bird species, and 450 plant species are threatened with extinction through salinity (ANZECC 2001).

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INVASIVE SPECIES

An invasive species is a non-indigenous species, occurring as a result of human activity, with an adverse impact on the habitats that it invades. Invasive species include feral animals, marine pests, non-native insects, other invertebrates, diseases, parasites, and weeds (weeds are discussed separately). Some invasive animals were deliberately brought into Australia while others were accidentally imported.

Invasive species are a threat to the environment, but they also have an impact on social and economic activities such as the agriculture industry. They can threaten native species, contribute to land degradation (through soil erosion) and reduce agricultural productivity. The damage they cause can be detrimental to the environment (threatening our unique biodiversity) and a high cost to the Australian economy. For instance in Australia, the annual cost, in terms of control and production loss estimates, of 11 types of feral animals has been estimated at around \$720 million (CRC 2004).

The cane toad is an example of a deliberately introduced feral animal. It was brought to Australia to control the cane beetles that destroy sugar cane crops. Cane toads failed to control the cane beetle and instead became a pest themselves, eating and poisoning various other insects, mammals and snakes. They continue to spread across Australia.

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WEEDS

Invasive weeds are among the most serious threats to Australia's natural environment and primary production industries. They displace native species, contribute significantly to land degradation, and reduce farm and forest productivity. Australia spends considerable time and money each year in combating weed problems and in protecting ecosystems and primary production on private and public land (AWC 2009).

Weeds of National Significance is an agreed list of 20 problem weeds used to guide a coordinated national effort for addressing weed problems. Selection of these species was made by the Australian government and all state and territory governments in 1999, based on environmental damage and economic impacts. The objective of the Weeds of National Significance program is to minimise the effects to Australia's natural ecosystems and productive capacity, while managing future threats to biodiversity, conservation, land management, societal welfare and primary industries.

In 2006-07, 88.8% (133,600 out of 150,400) of agricultural businesses reportedly undertook weed management activities to prevent or manage weeds on their holdings (ABS 2008). Australian farmers reported spending almost \$3b on natural resource management during the 2006-07 year. More than half (\$1.57b) was spent on the management of weed related issues. Animal and insect pest management was the next highest category of spending, followed by management of land and soil (ABS 2010).

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LINKS TO OTHER DIMENSIONS OF PROGRESS

In parts of Australia, land-related changes that result from human activities can take a long time to show themselves. The response time depends on a complex interaction of climate, geology and patterns of land use. Weeds and animal pests affect national income and wealth through the decreased value of production for farms, as farmers spend time and money managing weed-related issues, and animal and insect pests.

Some forms of agricultural production, land clearance, and other factors such as the weather can all contribute to salinity, which in turn impacts on biodiversity. National income and wealth are also affected by salinity, not just through the loss of agricultural production but also because of damage to roads, rail and buildings (the severity of these effects varies considerably from region to region). Soil erosion can also affect inland waters, as well as estuaries and inshore marine environments such as the Great Barrier Reef.

Land clearing has implications for greenhouse gas emissions and problems associated with inland water. Soil from agricultural land is washed into streams and dams, adding to the nutrient load.

See also the commentaries linked below.

RELATED PAGES

- Biodiversity
- Atmosphere
- Inland waters
- National income
- National wealth
- Oceans and estuaries
- Waste

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LAND GLOSSARY

Forest

An area, incorporating all living and non-living components, that is dominated by trees having usually a single stem and a mature or potentially mature stand height exceeding 2 metres and with existing or potential crown cover of overstorey strata equal to or greater than 20%. This definition includes Australia's diverse native forests and plantations, regardless of age, and encompasses areas of trees that are sometimes described as woodlands. Forests are categorised by forest type (dominant genus) and by height and crown cover class (forest structure) (BRS 2010).

Forest crown cover

Crown cover is the area of ground covered by tree canopies. A line around the outer edge defines the limits of an individual canopy. All the area within that line is counted as 'canopy', irrespective of gaps and overlaps (BRS 2010).

Invasive Species

Non-indigenous species which have an adverse impact on the habitats they invade, posing a potential threat to Australia's biodiversity. They can displace native species, cause environmental damage and have a flow on effect to other plants and animals as well as the economy such as agricultural production.

Irrigation Salinity

If the water table rises through increased irrigation then irrigation salinity occurs

Old growth forests

Old growth forests are ecologically mature forests where the effects of past disturbances are now negligible (BRS 2010).

Nature conservation reserves

Crown lands that are formally reserved for environmental, conservation and recreational purposes.

Plantation

Plantations are intensively managed stands of trees, of native or exotic species, created by the regular placement of seedlings or seeds. The primary purpose of plantation forestry is wood production. Plantation species fall into two groups: softwood - mainly pine (*Pinus*) species; and hardwood - mainly eucalypts, including '*Eucalyptus*' and '*Corymbia*' species (BRS 2010).

Regional forest agreements (RFAs)

RFAs are 20-year plans for the conservation and sustainable management of Australia's native forests. The Agreements provide certainty for forest-based industries, forest-dependent communities and conservation. They are the result of years of scientific study, consultation and negotiation covering a diverse range of interests. There are ten RFAs in four States: Western Australia, Victoria, Tasmania and New South Wales. Queensland also surveyed their forests to identify old-growth forests, but it did not lead to the establishment of a RFA.

Weeds

Weeds are unwanted plant species. Weeds can be native or exotic species, and can be regarded as a nuisance or harmful to the environment where they compete against cultivated or native plants and

threaten biodiversity.

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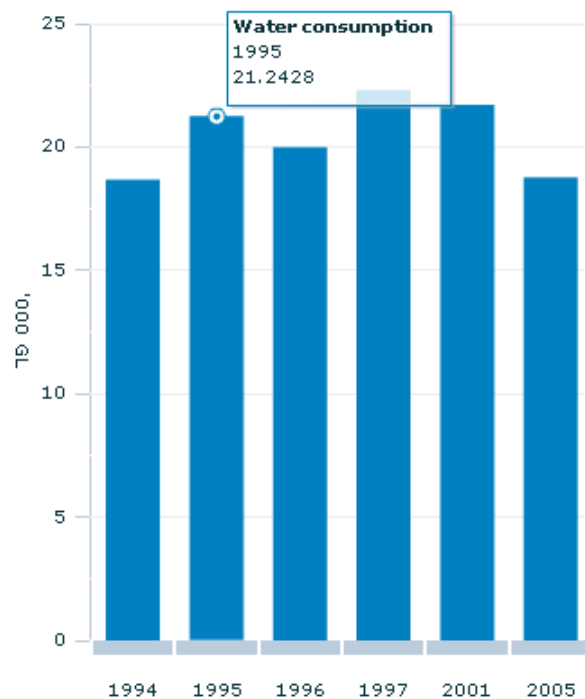
Inland waters

There is currently no single measure of inland waters that takes into account the quantity of water, the quality of water and the health of Australia's inland water ecosystems. Furthermore, measuring inland water use is problematic due to fluctuating weather patterns and resulting inconsistent user demands. As such, there is no headline indicator for this dimension. Instead, this commentary presents a number of supplementary indicators which illustrate how much water Australians use.

Supplementary indicators show that:

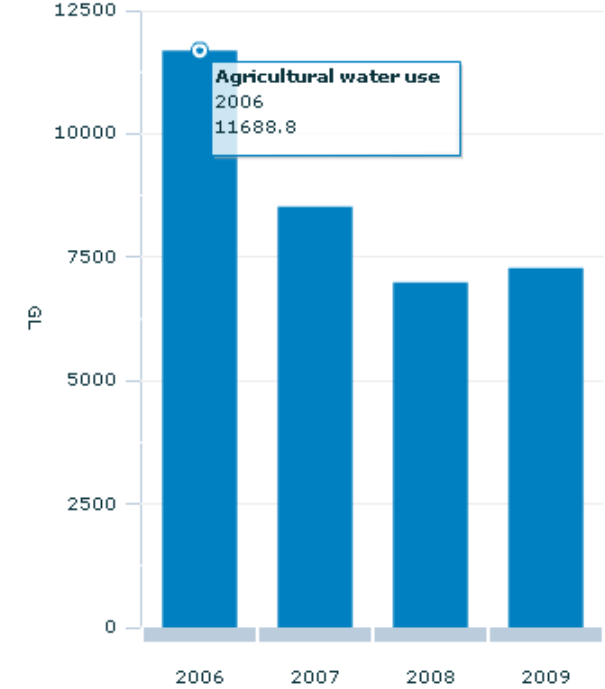
- The total annual volume of water consumed in Australia has fluctuated over the decade, but decreased by 12% from 1994-95 (21,200 GL) to 2004-05 (18,800 GL).
- Since 2005-06, agricultural water use has fallen from 11,700GL to 7,300 GL in 2008-09.
- Australians are making more reuse of water in the 2000s than in the 1990s.

Water consumption

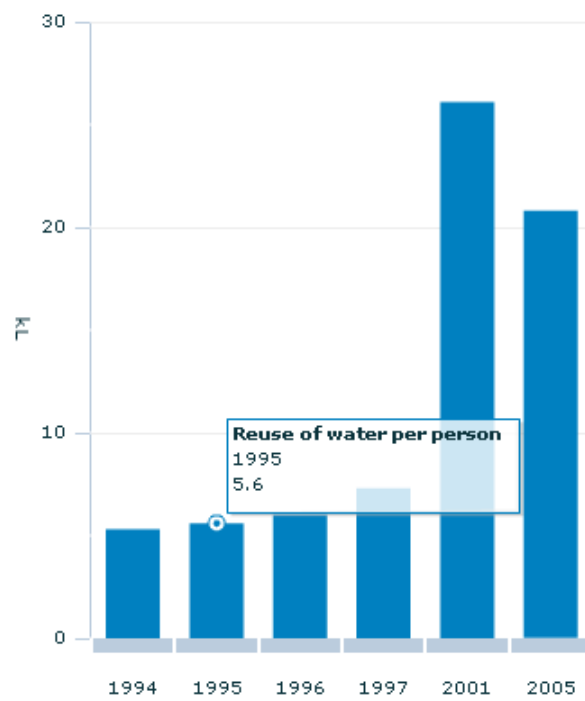




Agricultural water use



Reuse of water per person



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INLAND WATERS AND PROGRESS

The condition of Australia's water systems is an important indicator of whether life in Australia is getting better. Water is fundamental to the survival of people and other organisms. Apart from drinking water, much of our economy (agriculture, in particular) relies on water. Furthermore, the condition of freshwater ecosystems has a critical impact on the wider environment.

Freshwater is a finite and scarce resource in many areas of Australia. Consumption of fresh water potentially depletes water storages in dams and reduces river flows, and can have an adverse effect on the environment and the economy. Moreover, some 80% of Australia is classified as semi-arid, making Australia the driest inhabited continent in the world (BoM 2010a). Notwithstanding this, Australia has one of the world's highest levels of water consumption per head (OECD 2008).

Ideally a headline indicator for Australia's inland water systems would consider changes in the quantity of water, the quality of water and the health of Australia's inland water ecosystems, but such data are unavailable for much of the country. For this reason, there is no headline indicator for Australia's inland waters.

This commentary relies, instead, upon a range of supplementary measures to provide an indication of the quantity of water consumed in Australia, as well as the reuse of water and water used by the agriculture industry.

Water supply and use in Australia needs to be viewed in the context of Australia's climate. Therefore, further information is included about the amount of rainfall over time, as well as dam storage capacities and the use of household water conservation devices. These are included to provide more context around Australia's water use, and to illustrate the extent to which the climate and water use practices in Australia are contributing to the long term sustainability of water and water ecosystems.

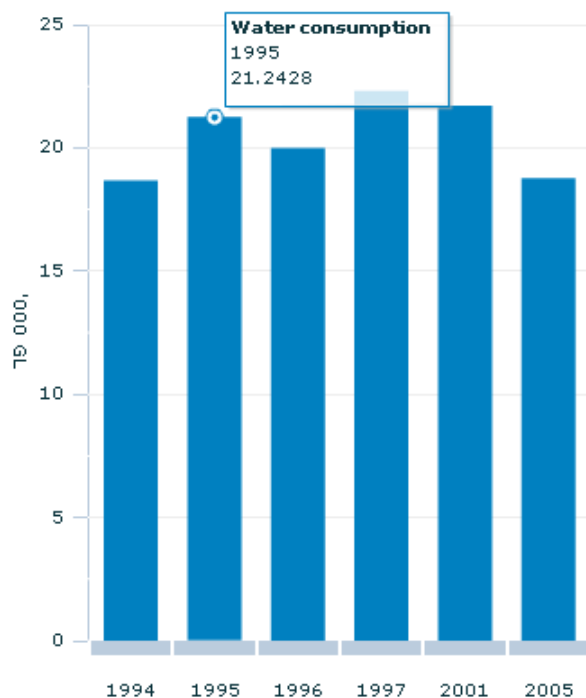
For a full list of definitions, please see the Inland waters glossary.

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Water consumption(a)



Footnote(s): (a) Year ending 30 June.

Source(s): ABS Water Account, Australia, 1993-94 to 1996-97, 2000-01, 2004-05 (cat. no. 4610.0)

WATER CONSUMPTION

Total water use is an important indicator of the extent to which human activity draws upon Australia's finite water resources. It is important to quantify water use because it gives a measure of the amount of water that society uses, the pressures placed on water systems by society, and the impacts of water management decisions on society.

Between 2000-01 and 2004-05, total water consumption decreased by 14%. Australian agriculture, other industries and households consumed 18,800 GL of water in 2004-05 compared to 21,700 GL in 2000-01. During 2004-05, a further 60,400 GL was extracted from the environment for use instream (mostly for hydroelectricity generation) before being returned to waterways.

Agriculture was the largest consumer of water in 2004-05, accounting for 65% (12,200 GL) of total water use in Australia (a decrease from 15,000 GL in 2000-01). Households were the next largest consumers of water, consuming 11% (2,100 GL) of total water use (down from 2,300 GL in 2000-01). The water supply, sewerage and drainage services industry was also a significant consumer of water, accounting for 2,100 GL (or 11%) of water consumption (mostly due to losses in distribution), followed by manufacturing with 600 GL (or 3%).

As agriculture comprises almost two-thirds of water use, it is the main driver for changes in total consumption, and agricultural water use has continued to be impacted by reduced water availability due to the drought. The recent drought has also seen many parts of Australia introduce water restrictions to help manage the use of water. Water restrictions varied from voluntary reductions of water to mandatory restrictions. In September 2010, Melbourne, Adelaide and Canberra still had staged water restrictions, while Sydney, Brisbane and Perth were encouraging permanent water conservation measures (without a staged restriction).

Extreme care should be taken when making comparisons between 2000-01 and 2004-05 data and data from the years 1993-94 to 1996-97. There have been a number of improvements and differences in

climate, data sources, data availability and data quality over time, so caution should be used when looking at the timeseries.

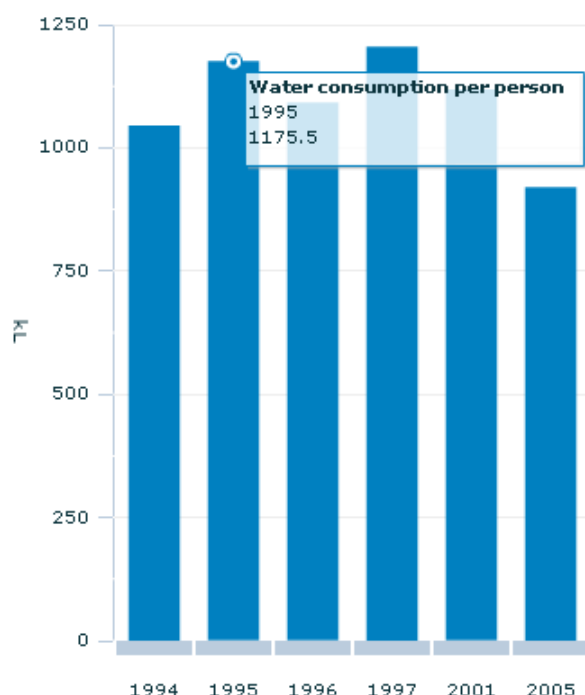
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Water consumption per person(a)



Footnote(s): (a) Year ending 30 June.

Source(s): ABS Water Account, Australia, 1993-94 to 1996-97, 2000-01, 2004-05 (cat. no. 4610.0); ABS Australian Historical Population Statistics, 2008 (cat. no. 3105.0.65.001)

WATER CONSUMPTION PER PERSON

The volume of water consumed by industry and households in Australia, relative to the nation's total population, illustrates the intensity of water usage in Australia.

In 2004-05, Australia consumed 920 kL of water per capita. This figure includes water used in agriculture, by other industries, and by households. On a per person basis, the 2004-05 water consumption is 18% lower than in 2000-01 (1,100 kL per capita).

Average household water use also declined over this period. In 2004-05, 103 kL per capita was used by households compared to 117 kL per capita in 2000-01. This period saw the introduction of domestic water restrictions and reduced availability of water for agricultural purposes. Agricultural water consumption per person has also decreased over this time, from 772 kL per capita in 2000-01 to 598 kL per capita in 2004-05.

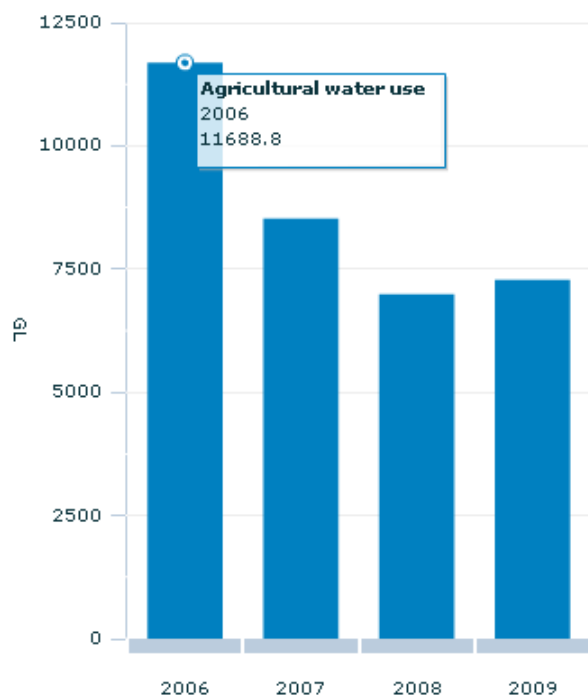
While there has been a decline in water consumption per person between 2000-01 and 2004-05, there does appear to be some variability in this indicator. A continued decline over several time periods would be needed to show a sustained improvement in this indicator.

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Agricultural water use in Australia(a)



Footnote(s): (a) Year ending 30 June.

Source(s): ABS Water Use on Australian Farms, 2004-05 to 2008-09 (cat. no. 4618.0)

AGRICULTURAL WATER USE

Agriculture is a major user of water in Australia, accounting for almost two-thirds (65%) of the total water use in Australia in 2004-05.

During 2008-09, about 7,300 GL of water was used on farms, a decline of 38% from 2005-06 (11,689 GL), and a slight increase on 2007-08 (6,989 GL).

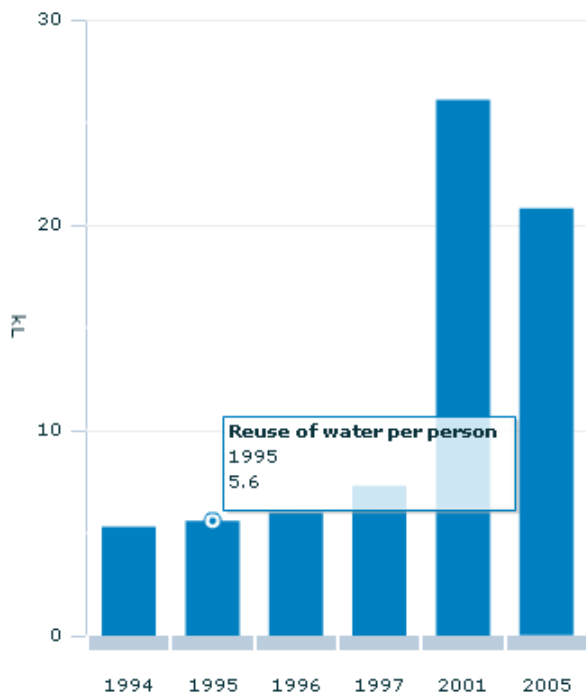
Changes in the type of crop irrigated can impact on the total volume of water used. There has been a large fall in the number of rice and cotton crops planted, due to water shortages in recent years, as they are the most water intensive crops to grow (ABS 2006-2010). This has led to a large fall in the volume of water used to irrigate these two crops. In 2004-05, rice and cotton growing consumed 619 GL and 1,819 GL of water respectively, but these fell dramatically to 101 GL (an 84% decrease) and 880 GL (a 52% decrease) in 2008-09.

Since 2005-06, there has been a decrease in the volume of water used for agriculture due to the continuing unavailability of water following the drought. Although this decrease in water use is seen as a positive sign, agricultural water consumption is very much influenced by climatic conditions, particularly rainfall, and this must be taken into account when assessing changes in water use. When in drought, there is little water available for use. When there is plenty of rain, there is no need to irrigate as much. Both situations can lead to reduced consumption of water for agricultural purposes.

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Reuse of water per person(a)



Footnote(s): (a) Year ending 30 June.

Source(s): ABS Water Account, Australia, 1993-94 to 1996-97, 2000-01, 2004-05 (cat. no. 4610.0); ABS Australian Historical Population Statistics, 2008 (cat. no. 3105.0.65.001)

REUSE OF WATER

Reuse water is waste, storm or drainage water that has been used again by industries or households without going back to the environment. Every litre of reuse water that is used, is one litre that does not need to be taken directly from river systems or dams. Reuse or recycled water is considered an important option for securing water supply into the future (AWA 2005).

During 2004-05, Australia used 21 kL per capita of reuse water, down from 26 kL per capita in 2000-01 or a decrease of 20%.

Despite the decrease between 2000-01 and 2004-05, the volume of reuse water per capita has increased greatly from the amounts reported in the 1990s. During the 1990s, the highest volume of reuse water per capita was 7 kL, only a third of the 2004-05 volume. If the increase in the usage of reuse water continues, it will lessen the pressure on scarce freshwater sources.

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AUSTRALIA'S WATER

Low rainfall over time and increased evaporation reduce run-off and stream flow. These events impact on inland waterways and wetlands in many ways, including reduced river flows, changes in species composition and community structure, reduced area for waterbird breeding, sea level rise resulting in saltwater intrusion to the freshwater bodies, and changes in water quality. In the interest of maintaining the health of Australia's rivers, a number of states and territories are allocating and providing water to the environment, generally known as 'environmental flows'. Without sufficient flows, water-dependent ecosystems may lose their capacity to provide for environmental and public benefit outcomes. Such losses can be difficult and costly, both to the environment and to the economy.

There are many large dams in Australia to provide a reliable water resource for irrigated agricultural needs, urban water needs and hydro-electric power generation. In addition to Australia's large dams there are also many thousands of farm dams throughout Australia. Australia's high per capita storage capacity is needed to sustain agricultural production and water supplies for human use during long dry periods such as a drought.

In countries such as Australia, the development of water saving devices has brought about improvements in water conservation and reduced water use. In recent years, Australia has seen an increased use of grey water and rainwater tanks, and the inclusion of dual flush toilets and water saving shower heads in more households. These advances have improved Australia's water efficiency.

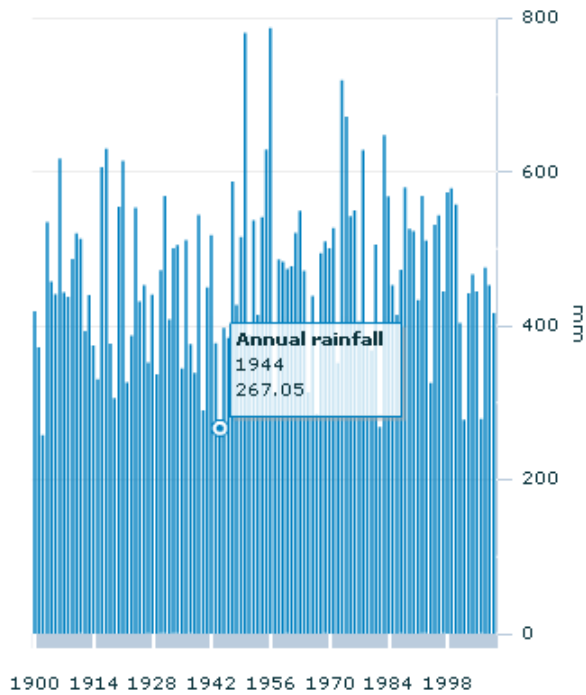
The following sections look at rainfall patterns (particularly for the Murray-Darling basin), water storage and changes in household water conservation practices.

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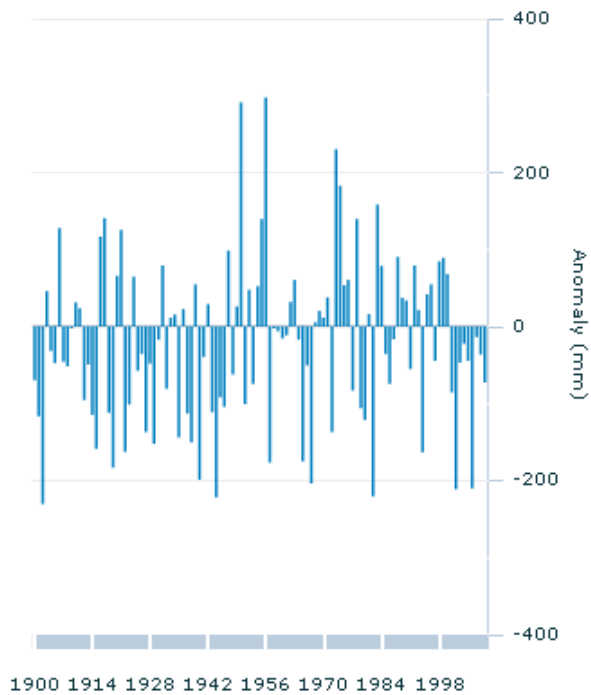
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Annual rainfall - Murray Darling Basin



Source(s): Bureau of Meteorology 2010 Annual Rainfall - Murray Darling Basin

Annual rainfall anomaly - Murray Darling Basin



Source(s): Bureau of Meteorology 2010 Annual Rainfall Anomaly - Murray Darling Basin

RAINFALL

Rainfall is highly variable between regions, seasons and years. Fluctuations from drought to floods are associated with the Southern Oscillation phenomenon (notably the El Nino events). A dramatic illustration

of this variability is the major flooding following an estimated 403 cubic kilometres (403,000 GL) of rainfall which fell across the Northern Territory and Queensland over a 10 day period ending 3 March 2010 (BOM 2010c).

Australia's rainfall in 2009 was 453mm, which was slightly below the long-term average (1961-1990) of 464mm (BOM 2010b).

The impact of varied and unreliable rainfall is felt mainly by the agricultural sector where prolonged droughts in many areas have severely limited water availability to non-irrigated holdings and, in more recent years, irrigated holdings as well. The area of irrigated agricultural land in Australia decreased by 31% between 2005-06 and 2008-09, and the volume of water applied over the same period decreased by 39% (ABS 2009).

Urban settlements have also been affected by low rainfall over catchment areas. Many major cities and towns have had mandatory water restrictions in place for several years and government funded programs have also been employed to facilitate the installation of low-flow shower heads, dual flush toilets and water tanks. In order to augment water supplies, several states have already commissioned large desalination plants. The total capacity of plants servicing major cities is expected to rise to over 450 GL/year by 2013, a ten-fold increase from 2006 (CSIRO 2009a).

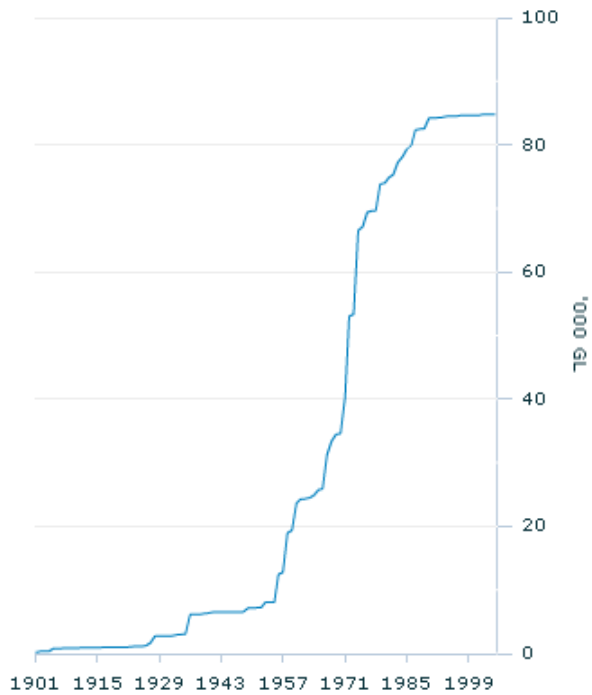
Because of the highly varied nature of Australia's rainfall, measures of total rainfall and rainfall anomalies in key regions are considered more useful indicators of the impacts of dry conditions than Australia-wide data. The Murray Darling Basin contains Australia's major agricultural areas, and for this reason, data for this region is shown. Even over the Murray-Darling Basin, the annual rainfall has been quite variable over time. The annual rainfall anomaly shows nine consecutive years (from 2001 to 2009) of below the long-term average rainfall, which is the longest length of time of below average rainfall since records began in 1900.

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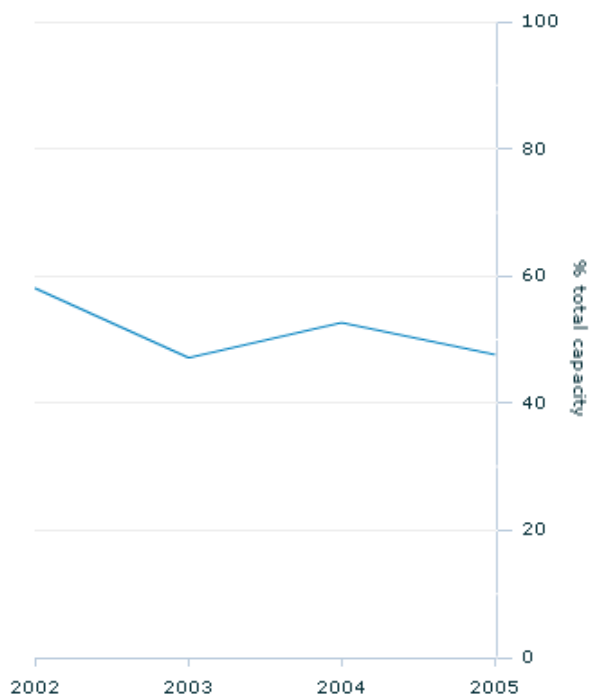
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Total storage capacity of large dams



Source(s): ABS data available on request, Water Account Australia, 2004-05

Large dam storage levels(a)



Footnote(s): (a) At June.

Source(s): ABS data available on request, Water Account Australia, 2004-05

WATER STORAGE

Australia is the driest inhabited continent and has the highest per capita surface water storage capacity of any country in the world. The large number and size of water storages is a function of both Australia's aridity and its highly variable rainfall.

At the start of the 20th century, the combined storage capacity of all large dams was 240 GL. This grew to 7,200 GL by 1950 and 84,800 GL by 2005. Australia has over 500 large dams, with many thousands of additional farm dams throughout the nation. Australia has a high water storage capacity per person, which is needed to sustain agricultural production and water supplies for human use during long dry periods. Drought conditions are reflected in an 18% fall in the water stored in large dams between 2002 and 2005, when levels fell from 49,235 GL to 40,407 GL.

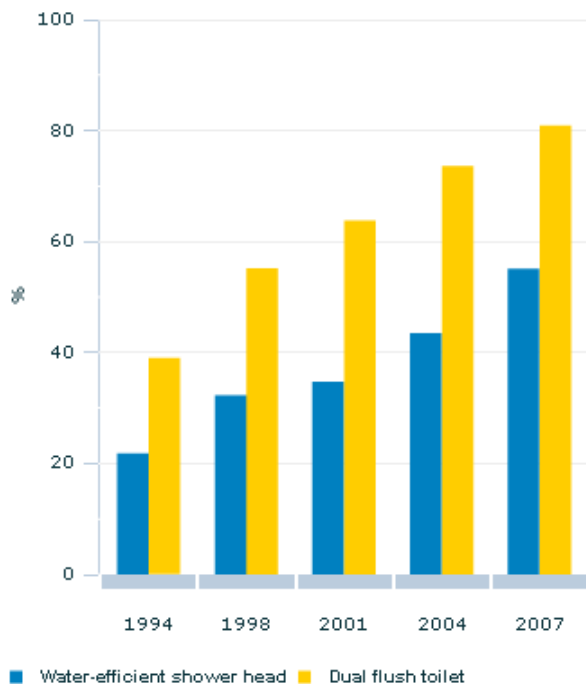
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Household water saving devices in Australia



Source(s): ABS Environment Issues: Peoples Views and Practices, March 2007 (cat. no. 4602.0)

HOUSEHOLD WATER CONSERVATION

Household water use and conservation have become increasingly important in recent years due to the continued prevalence of drought conditions, and the consequential introduction of water restrictions in many parts of Australia.

In addition to mandatory water restrictions in many parts of Australia, many Australians have been voluntarily conserving water by adopting water saving practices and installing water saving devices such as dual flush toilets.

In 2007, the majority of Australian households had some type of water conservation device installed in their home. In June 1994, only 39% of households had a dual flush toilet, but this increased to 81% in 2007. Similarly, the proportion of households using water-efficient shower heads rose from 22% in 1994 to 55% in 2007.

Moreover, in 2007, 67% of households reported that they saved water in the bathroom, 64% in the laundry, 50% in the kitchen and 40% in the toilet. Collecting grey water for reuse in and around the residence, using full loads when washing dishes or clothing, turning off the tap while cleaning teeth or shaving, and taking fewer and shorter showers were the most popular water saving measures.

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LINKS TO OTHER DIMENSIONS OF PROGRESS

Economic production, in particular agricultural production, is the major user of water in Australia and so exerts pressure on this finite resource.

Water quality is strongly linked to land management practices such as land clearance and soil degradation, while much of our biodiversity depends on healthy freshwater ecosystems. For example, increasing river salinity caused by dryland salinity can result in water becoming too saline for drinking or irrigation. It can also kill streamside vegetation. This, in turn, can increase erosion in river banks, which can cause further deterioration in water quality and loss of aquatic species.

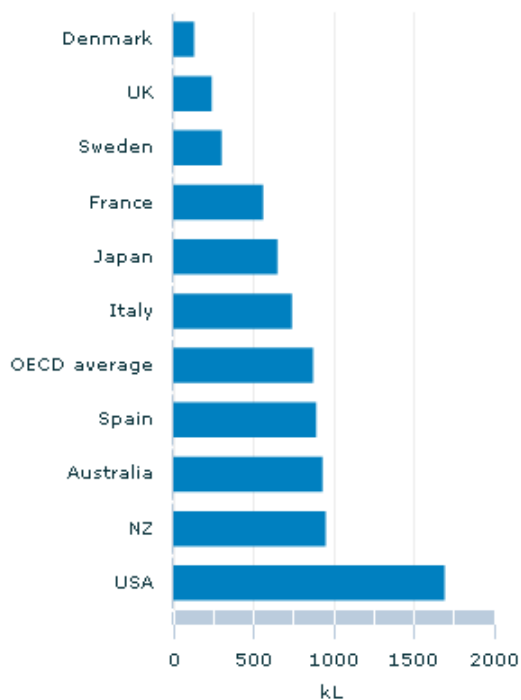
See also the sections linked below.

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Water use per person in selected OECD countries(a)



Footnote(s): (a) Year for which data relates varies from country to country (1998-2006). For further details, see the Inland waters datacube.

Source(s): OECD Environmental Data Compendium 2008

INTERNATIONAL COMPARISONS

Freshwater resources are fundamental to sustaining life, economic activities and environmental health. An OECD indicator that illustrates the intensity of water use in a number of countries is water use (abstractions) per person.

During the 2000s, water use per person varied greatly across OECD countries. The OECD average is 870 kL per person per year. The United States of America had the highest level of water use per person (1,690 kL) among the OECD countries during the recorded period. Both Australia (930 kL) and New Zealand (950 kL) also had water use above the OECD average. Denmark recorded the lowest water use per person (130 kL) of all the OECD countries.

Across the OECD member countries, there are many factors that impact levels of water use. The industrial structure of the member country as well as the scarcity of available freshwater can both affect the volume of water use. A country with a large agricultural industry, for example, will consume more water than a country with a smaller agricultural industry.

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INLAND WATERS GLOSSARY

Anomaly

The departure of an element from its long-period average value for the location concerned. For example, if the maximum rainfall for June in Melbourne was 20 millimetres higher than the long-term average for this month, the anomaly would be +20 mm. The current international standard is to use the 30 year average from 1961 to 1990 as the long-term average.

Distributed water

Distributed water is water supplied to a user including through a non-natural network (piped or open channel), and where an economic transaction has occurred for the exchange of this water. The majority of distributed water is supplied by the 'Water supply, sewerage and drainage services' industry (ANZSIC group 3701). The water supply component consists of units mainly engaged in storage, purification or distribution of water by pipeline or carrier. It also includes the operation of irrigation systems that supply water to a farm and the supply of steam and hot water.

GL

Gigalitre, one thousand million litres.

In-stream use

The use of freshwater in situ (eg. within a river or stream). This can include recreation, tourism, scientific and cultural uses, ecosystem maintenance, hydro-electricity and commercial activities and dilution of waste. The volume of water required for most in-stream uses can not be quantified, with the exception of hydro-electricity generation.

kL

Kilolitre, one thousand litres.

Large dams

The storage capacity of large dams is available from the ANCOLD Register of Large Dams (ANCOLD 2006). Large dams are defined as dams with a crest or wall height of greater than 15 metres, or as dams with a dam wall height of greater than 10 metres but meeting other size criteria as follows: having a crest more than 500 metres in length; creating a reservoir capacity of no less than 1,000 ML; the ability to deal with a flood discharge of no less than 2,000 cubic metres per second; or, being of unusual design (ANCOLD 2001).

OECD

Organisation for Economic Co-operation and Development.

Reuse water

Drainage, waste or storm water that has been used again without first being discharged to the environment. It may be treated to some extent.

Water consumption

Water consumption is equal to distributed water use plus self-extracted water use plus reuse water use minus distributed water supplied to other users minus in-stream use (where applicable).

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INLAND WATERS REFERENCES

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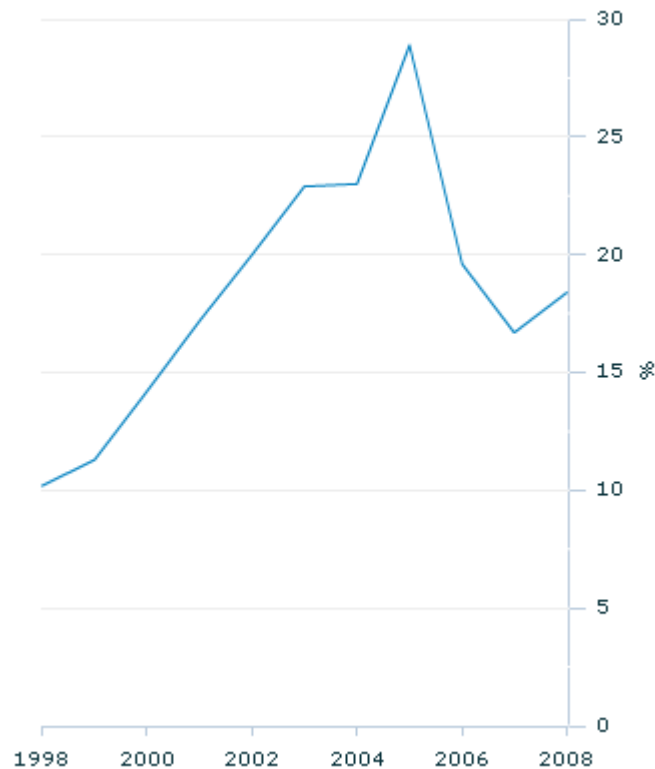


Oceans & estuaries

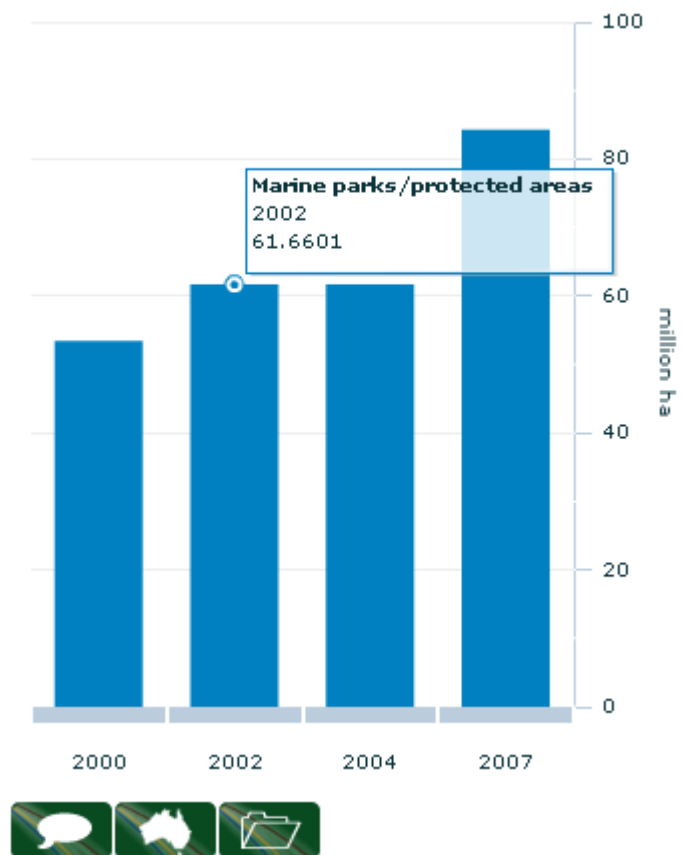
Despite their importance to Australia, there is no comprehensive and nationally consistent system for measuring the condition of Australia's ocean and coastal ecosystems. As a result, this commentary relies upon two supplementary measures to provide some indication of whether the condition of Australia's marine ecosystems is getting better. These indicators show that:

- The proportion of fish stocks that were overfished or subject to overfishing has increased from 10% in 1998 to 18% in 2008. However, 2005 had the highest proportion of fish stocks that were overfished or subject to overfishing (29%).
- Australia's Commonwealth marine parks and protected areas covered 84.3 million hectares in 2007, an increase of 58% from 53.4 million hectares in 2000.

Australian fish stocks overfished and/or subject to overfishing



Commonwealth marine parks and protected areas



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OCEANS, ESTUARIES AND PROGRESS

Australia's oceans are diverse, ranging from tropical seas, through temperate to polar waters, and from shallow coastal waters to ocean trenches that can be six kilometres deep. This diversity is reflected in the variety of marine life in Australian waters, including more than 4,000 species of fish, 45 species of whales, dolphins and porpoises, and many species of seabirds. Nineteen of the world's 24 albatross species appear in Australian waters (Zann 1995).

Many Australians like to live on or near the coast and use it for recreation, such as swimming, boating and fishing, as well as economic activity. The economic benefits associated with marine and coastal areas include shipping, tourism, fisheries and offshore oil and gas industries.

Adverse changes in the condition of Australia's oceans and coastal areas affect the size and diversity of marine life. Although changes to marine environments can be the result of many factors, human activities play a substantial role in altering ocean ecosystems. Overfishing and practices such as trawling can deplete natural fish stocks and destroy fragile habitats, degrading the overall condition of marine ecosystems.

Coastal population increases can also degrade marine habitats by increasing the volume of sewage, stormwater, chemical and nutrient run-off that enter river systems and oceans. In turn, human induced changes to marine environments can affect human activities that rely upon healthy ocean environments, such as fishing and tourism.

Many of the ways in which we use our oceans, beaches and estuaries affect the quality of ocean water and the diversity of life within it. An ideal indicator might consider a measure of the biodiversity within them.

As there is no comprehensive and nationally consistent system for measuring the condition of Australia's ocean and coastal ecosystems, this commentary relies upon supplementary measures to provide some indication of whether the condition of Australia's marine ecosystems is getting better. The supplementary measures in this section include the number of Australian fish stocks classified as overfished and/or subject to overfishing, and the marine area protected by the Commonwealth Government. Information on the extent of coastal development, marine oil spills, and bycatch and illegal fishing is also included.

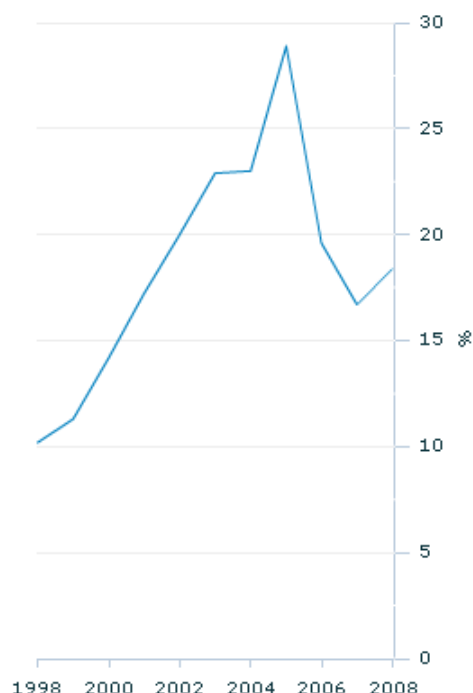
For a full list of definitions, please see the Oceans and estuaries glossary.

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Australian fish stocks overfished or subject to overfishing(a)(b)



Footnote(s): (a) Year ending 30 June for 2001 and 2003 data, else calendar year data. (b) The total includes 'Uncertain' about whether the fish stocks will be overfished or not.

Source(s): Bureau of Rural Sciences & Australian Bureau of Agricultural and Resources Economics, Fishery Status Report 2008

FISH STOCKS

Fishing is the most widespread economic activity in marine ecosystems, and Australia has the world's third largest fishing zone, covering 11 million square kilometres (DFAT 2008). Information regarding the sustainability of fish stocks is, therefore, an important indicator of progress as it outlines the extent to which fishing pressure impacts upon marine ecosystems.

In 2008, 18 of the 98 fish stocks (18%) surveyed in Australian government-managed fisheries were overfished, or subject to overfishing. The number of stocks classified as overfished and/or subject to overfishing has fallen since 2005, when it peaked at 24 out of 83 assessed stocks (29%). The 'Securing our Fishing Future' program was introduced in 2005 to help address the issues of overfishing. This program ceased in June 2010.

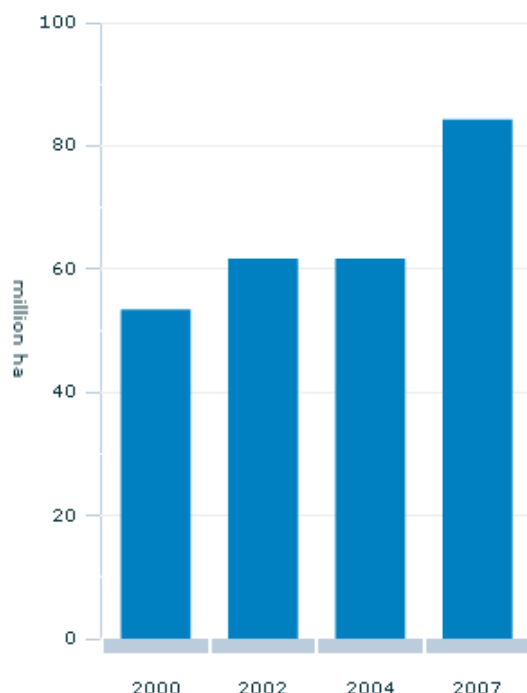
Of the 18 stocks classified as overfished or subject to overfishing in 2008, 13 were overfished and 8 were subject to overfishing. Three of the fish stocks (Southern bluefin tuna, jackass morwong and upper-slope gulper sharks) were both overfished and subject to overfishing (ABARE & BRS 2009). The highly migratory Southern bluefin tuna has been classified as overfished since 1992.

Although methods for assessing the status of Australian fish stocks have improved considerably in recent times, a significant degree of uncertainty still underlies the status of many of Australia's fish populations. In 2008, 42% of the government-managed stocks surveyed had not been evaluated in terms of their risk of, or exposure to, overfishing due to inadequate information.

RELATED PAGES

- Oceans and estuaries glossary
- Oceans and estuaries references

Commonwealth marine parks and protected areas



Source(s): Department of the Environment, Water, Heritage and the Arts, Collaborative Australian Protected Area Database; DEWHA, Commonwealth marine protected areas estate

MARINE PARKS AND PROTECTED AREAS

Efforts to protect Australia's ocean environment include the establishment of a system of marine protected areas, and the establishment of guidelines to select and manage protected areas. Marine protected areas help preserve habitat and natural population levels for the species that live in these environments.

While many rare or threatened species are protected from direct harm by legislation, it is also important to ensure that steps are taken to protect their habitats. Species need secure areas in which to forage and breed if they are to survive in the long term. Increased sediment and pollutants, and lower salinity and natural disasters, have caused additional stress to the reefs.

Marine parks are home to turtles, seabirds, various marine mammals, coral species, seagrasses, molluscs and fish. The diversity and abundance of marine life also attracts tourists, generating business opportunities for coastal communities. Tourist activities include snorkelling, scuba diving, whale watching, swimming with dolphins and turtles and viewing coral reefs. While tourism is an essential part of the economy, unless managed carefully, it can have an adverse effect on the reefs themselves.

Moreover, coral reefs are particularly vulnerable to human induced climate change, and coral bleaching is more likely to occur when sea temperatures increase. Climate change is also expected to lead to increased costs associated with monitoring and managing changes observed in reefs.

Australia's Commonwealth marine reserves covered 84.3 million hectares in 2007, an increase of 58% from 53.4 million hectares in 2000. The Great Barrier Reef Marine Park, off the coast of Queensland, is Australia's largest marine reserve managed by the Commonwealth government and covers an area of more than 34 million hectares.

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AUSTRALIAN WATERS AND COASTLINE

The natural landscapes of Australia underpin both international and domestic tourism. In particular, the coastal zone is an environmental asset that is fundamentally important to the Australian lifestyle and the economy. The World Heritage status of some of Australia's coastal features can cultivate local and national pride and develop feelings of responsibility to maintain and protect the area. There may be increased tourism as a result of World Heritage status, and this can, in turn, increase employment in the local community. However, increased tourism can put increased pressure on the condition of these World Heritage areas, and this needs to be managed.

The land on Australia's coast is a valuable and limited resource, but there is continuing demand for additional residential and marina development. This is due to a fast growing population in the coastal zone, the strong tourism market, and the fact that much of Australia's trade is undertaken by shipping. Development in the coastal zone can adversely affect the coastal landscape through erosion, pollution and oil spills.

The greatest damage to Australian waters from oil spills is likely to occur near areas of high conservation (such as the Great Barrier Reef), although this depends on the size and location of the spill as well as the prevailing weather conditions at the time. Oil spills can harm seabirds, mammals, fish, and plant life, and can spoil beaches and coastal areas. The number, frequency, extent and volume of oil spills provide an indication of the intensity of this pressure on the environment and economy.

The following sections discuss Australia's coastal development, the number of maritime oil spills, and bycatch and illegal fishing.

RELATED PAGES

- [Oceans and estuaries glossary](#)
- [Oceans and estuaries references](#)

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COASTAL DEVELOPMENT

Australia's coastline is 59,700 kilometres in length, comprising a mainland coastline (including Tasmania) of 35,900 kilometres, and 23,800 kilometres of island coastlines (Geoscience 2009). The coastline is under increasing pressure from urbanisation, with the coastal zone being one of the fastest growing areas in Australia in terms of population.

The expansion of coastal urban development places increasing pressure on the natural environment through the effects of land clearing, waste disposal and pollution. Building along the foreshore and on sand dunes can affect the coastal landscape, coastal processes, and the natural movement of sand. Structures built on the coastline can increase erosion, leading to the need for beach replenishment. Coastal planning and management is now being undertaken to try to take into account these physical processes to avoid further erosion. As well as increased erosion, coastal communities are also vulnerable to rising sea levels, tropical cyclones and a loss of wetlands. In addition, the discharge of sewage and stormwater, land run-off, groundwater, and river inputs of nutrients and sediments to estuaries and the coastal waters constitutes one of Australia's greatest coastal management challenges (NLWRA 2002).

In 2008-09, populations of coastal areas in Western Australia were among the fastest-growing of coastal areas in Australia, including Capel (6.0%), Mandurah (5.1%) and Port Hedland (4.9%). In Queensland, the largest population increases were in the Gold Coast (increase of 15,600 people), Sunshine Coast (increase of 9,600 people), Townsville (increase of 5,600 people) and Cairns (increase of 5,200 people). Lake Macquarie on the coast north of Sydney had the largest population growth in NSW outside of Sydney (increase of 2,900 people) (ABS 2010).

The population density of Australia's coastal areas increased by 14.0% between 2001 and 2009, compared to 13.1% for Australia as a whole. The coastal area outside of the capital cities is the fastest growing, increasing by 15.0% between 2001 and 2009.

Measuring the impact that human settlements have upon estuaries and coastal areas is difficult as there is no national-level data that comprehensively records discharge into marine ecosystems or its impact on biodiversity. In 2002, (the most recent data available) the National Land and Water Resources Audit assessed the condition of about 1,000 estuaries around Australia and found that 50% were near-pristine, 22% were largely unmodified, 19% had been modified and 9% had been extensively modified (NLWRA 2002). Most of the near-pristine estuaries were located away from population centres.

Population density in coastal areas - persons per km²

	2001	2006	2009	% change 2001-2009
All coastal areas	3.75	4.01	4.27	14.0
Coastal areas excluding capital cities	1.46	1.58	1.68	15.0
Coastal areas within capital cities	352.38	374.94	399.63	13.4
Australia	2.52	2.69	2.85	13.1

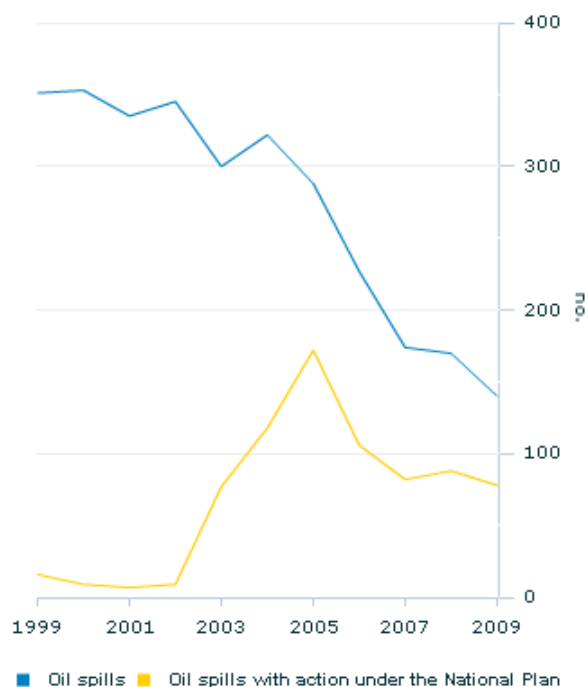
Source: ABS data available on request, ABS Demographic data.

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Number of maritime oil spills



Source(s): Australian Maritime Safety Authority, National Plan Annual Reports

MARINE POLLUTION FROM OIL SPILLS

It is estimated that 3.2 million tonnes of oil spill into the world's oceans each year from shipping and land-based sources (DEWHA 2003). Oil spills affect marine wildlife by coating their bodies with a thick layer of oil that sticks to fur and feathers, damaging the insulation or waterproofing properties of their fur or feathers. Oil in the environment can also cause problems by poisoning wildlife higher up the food chain, creating health problems and damaging marine mammals immune systems. The oil may also damage estuaries, coral reefs, seagrass and mangrove habitats which are the breeding areas of many fish and crustaceans.

Australia has had a national strategy for responding to maritime oil spills since 1973. This strategy was extended in 1998 to deal with maritime chemical spills in Australian waters, and then became known as the National Plan. It is aimed at providing a prompt and effective response to marine pollution incidents. The plan is designed to protect the community and the environment of Australia's marine and foreshore zones from the adverse effects of oil and other noxious or hazardous substances.

The number of reported oil spills in Australian waters has been decreasing over the past 10 years, falling from 353 in 1998-99 to 140 in 2008-09. Of the 140 reported oil spills in 2008-09, 78 required some type of action under the National Plan. The environmental impact of oil spills depends largely on the size of the spill, the type of oil, the location of the accident and the prevailing weather conditions at the time.

The volumes of oil spilled in Australian waters is unknown and there are oil spills that go unrecorded.

RELATED PAGES

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BYCATCH AND ILLEGAL FISHING

Bycatch

Bycatch (or non-target catch) is the unintentional catch of a species (such as seabirds, marine mammals and sea turtles) during fishing operations and is a significant environmental issue in many of the world's fisheries. The status of most bycatch species is uncertain.

Trawl fisheries, in particular, are recognised as discarding the greatest amount of bycatch compared to other commercial fishing methods. However, baited hooks on longlines set to catch tuna, can also catch seabirds such as albatrosses and petrels. Bycatch also includes fish caught by discarded fishing gear which continues to catch marine species indefinitely.

Bycatch is particularly an issue for endangered species such as sea turtles. Worldwide, there are only seven species of sea turtle and six of these live in Australian waters. In the Northern Prawn Fishery, the use of Turtle Excluder Devices (TEDs) has reduced the turtle bycatch from around 5,000 captured a year prior to 2000, to a reported 120 a year in 2003 (Robins et al 2002).

Illegal fishing

Illegal, unreported and unregulated fishing (henceforth called illegal fishing) is considered to be one of the most serious threats to the health of the world's fisheries and oceans. Illegal fishing makes it difficult to conserve fish stocks and manage fisheries at sea. Not only does illegal fishing impact on management and overfishing but it also has broader ecosystem impacts such as the bycatch of seaturtles, seabirds and sharks in the longline fisheries for tuna and Patagonian toothfish (Gianni and Simpson 2005).

The estimate of illegal fishing for the area covered by the Convention for the Conservation of Antarctic Marine Living Resources was 938 tonnes for 2008-09. This is less than the illegal catch in 2007-08 (1,169 tonnes), and substantially less than that caught in 2006-07 (3,615 tonnes) and 2005-06 (3,420 tonnes) (AFMA 2010; AFMA 2009).

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LINKS TO OTHER DIMENSIONS OF PROGRESS

A range of economic benefits come from our use of coastal and marine resources through activities such as tourism, fishing, trade (shipping) and mining. In turn, these economic activities can place pressure on the condition of our marine and coastal environments. Fishing activity can impact on biodiversity by placing pressure on the stocks of fish, and contributing to the depletion of fish species for marine mammals and birds to prey on.

Human activities and land use patterns that increase nutrients and turbidity in inland waterways (which ultimately flow into the sea) can alter marine habitat by causing a deterioration in water quality. This can lead to other changes in the marine habitat such as the loss of seagrass. Sea temperature increases have been associated with greenhouse gas emissions, which can also alter marine habitats and make it less suitable for some species.

Invasive species put pressure on coastal and marine environments, for example invasive plant species can replace native coastal vegetation communities, altering the habitat and making it less suitable for native animals.

The marine environment and our coast are a source of recreation and leisure for many Australians, and some people prefer to live near the coast. Many of us enjoy going to the beach and visiting coastal National Parks and other reserves as part of our leisure time activities.

See also the sections linked below.

RELATED PAGES

- Land
- Inland waters
- Atmosphere
- Biodiversity
- Waste
- National income
- Culture and leisure

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OCEANS AND ESTUARIES GLOSSARY

Biomass

Total weight of a stock or a component of a stock.

Bycatch

A species that is: (a) incidentally taken in a fishery and returned to the sea; or (b) incidentally affected by interacting with fishing equipment in the fishery but not taken.

Coastal areas

Defined as a Statistical Local Area (SLA) that borders the coast, harbours, or estuarine rivers (with one exception of Unincorporated Flinders Ranges). Note that many SLAs extend inland for large distances. This is based on 2009 Australian Standard Geographic Classification (ASGC) boundaries.

Fish stock

A fish stock refers to a specific population of fish, which may or may not be of the same species. Changes have occurred in the ways in which fish stocks are classified. For example, in 2008, orange roughy, previously assessed as a single stock, was divided into three separate stocks based on biological information - eastern, southern and western. The reclassification of this stock as three distinct stocks would influence fish stock status statistics.

Fish stock status

The Australian government classifies fish stocks according to their susceptibility to unsustainable fishing practices. The system used to classify stock status has undergone several modifications, the most recent in 2004, when the categories 'underfished' and 'fully fished' categories were replaced by a combined category of 'not overfished'. The number of fish stocks examined each year has generally increased over time although occasionally a stock may be removed from assessment. The reclassification of fish stocks would also influence fish stock status statistics for these species.

Fishery

The collective enterprise of taking fish, usually defined by a combination of the species caught (one or several), the gear and/or fishing methods used, and the area of operation.

Illegal fishing

Illegal, unreported and unregulated fishing

International Union for the Conservation of Nature (IUCN) protected area classification scheme

Category IA – Strict Nature Reserve: Protected area managed mainly for science.

Category IB – Wilderness Area: Protected area managed mainly for wilderness protection.

Category II – National Park: Protected area managed mainly for ecosystem protection and recreation.

Category III – Natural Monument: Protected area managed for conservation of specific natural features.

Category IV – Habitat/Species Management Area: Protected area managed mainly for conservation through management intervention.

Category V – Protected Landscape/Seascape: Protected area managed mainly for landscape/seascape conservation and recreation.

Category VI – Managed Resource Protected Areas: Protected area managed mainly for the sustainable use of natural ecosystems.

Longline

Fishing gear in which short lines carrying hooks are attached to a longer main line at regular intervals. The longlines can be as long as 100 km and have several thousand hooks attached. There are two types of longline: Pelagic longlines are suspended horizontally at a predetermined depth with the help of surface floats and demersal longlines are set at the seabed with weights.

Marine parks

A protected area managed mainly for ecosystem protection and recreation, such as the Great Barrier Reef Marine Park.

National plan

A national strategy for responding to marine spills and maritime chemical spills in Australian waters. It is aimed at providing a prompt and effective response to marine pollution incidents. The plan is designed to protect the community and the environment of Australia's marine and foreshore zones from the adverse effects of oil and other noxious or hazardous substances.

Overfished

A fish stock with a biomass below the biomass limit reference point. 'Not overfished' implies that the stock is not below the threshold.

Overfishing

Overfishing can occur when the catch rate exceeds the capacity of the natural population to renew itself through reproduction.

Protected areas

An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity and of natural and associated cultural resources, and managed through legal or other effective means. It is classified as protected under the International Union for the Conservation of Nature (IUCN) protected area classification scheme.

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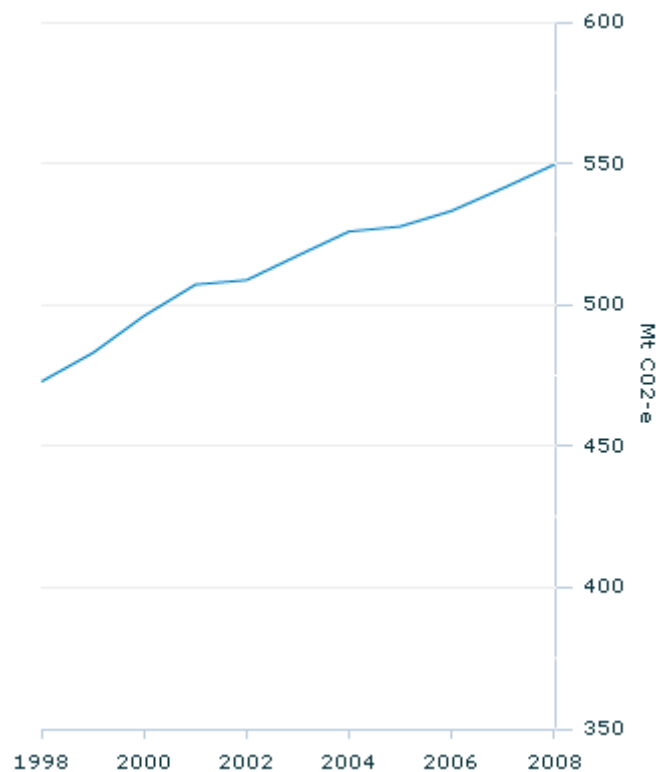
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Atmosphere



Net greenhouse gas emissions(a)

Australia's net greenhouse gas emissions (excluding the land use, land use change and forestry sector) increased by 16% over the last decade, from 473.0 million tonnes of carbon dioxide equivalent gases in 1998 to 549.5 million tonnes in 2008.

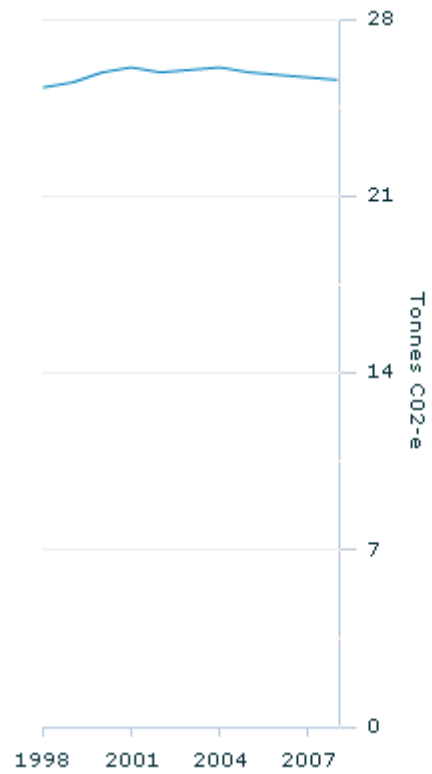
(a) Excluding emissions from land use, land use change and forestry sector.

 Commentary

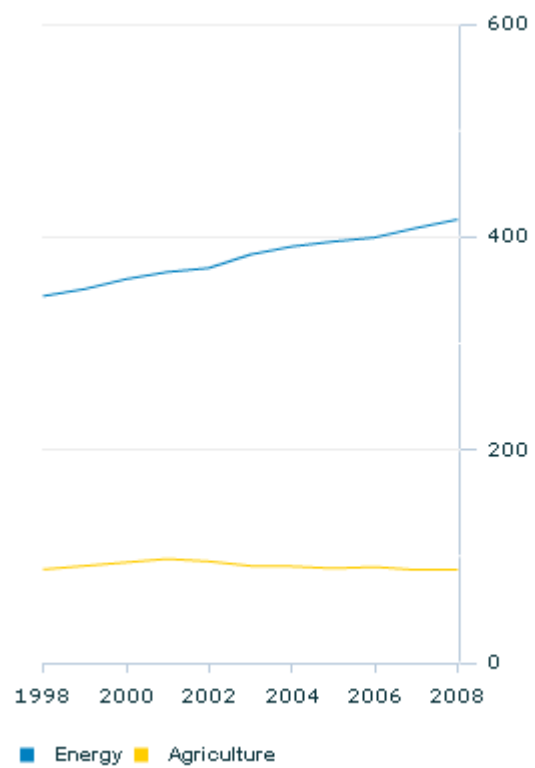
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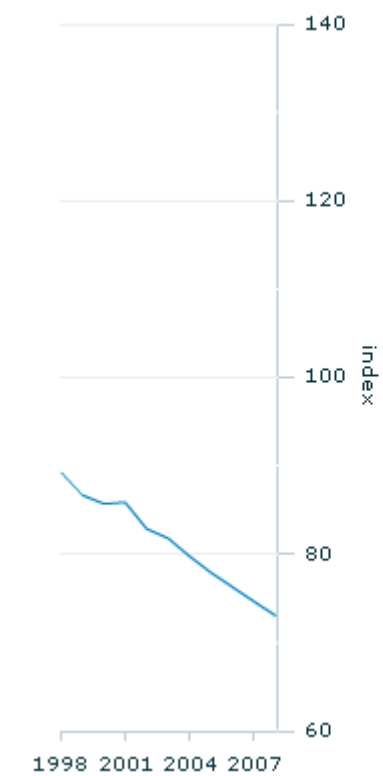
Net greenhouse gas emissions per capita



Emissions by sector - Mt CO2-e



Net greenhouse gas emissions per unit of GDP



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ATMOSPHERE AND PROGRESS

The atmosphere is an essential component of all ecological systems on Earth. The atmosphere plays a critical role in regulating global, regional and local climate and is essential in supporting life on Earth. Oxygen is required for life, stratospheric ozone protects us from harmful solar radiation, and greenhouse gases help to maintain a temperature range suitable for life.

Climate change is a global issue with both global and regional consequences. Human activity is contributing to the change in climate, which has an impact on Australia's rainfall, temperatures, bushfire frequency, health, heritage, and biodiversity for current and future generations (DCCEE 2010d). The headline indicator for Atmosphere is Australia's net greenhouse gas emissions. The headline indicator can also be compared internationally to assess Australia's contribution to greenhouse gas emissions on a global scale.

Supplementary progress indicators in the Atmosphere dimension include greenhouse gas emissions on a per person basis, by sector and relative to GDP. Changes in the production of renewable energy (which produces relatively few greenhouse gases) is also included as a supplementary progress indicator.

Overall, air quality in Australia is relatively good, but for some places in Australia, such as large cities and mining areas, air quality can be an issue. Therefore, further information has been provided about the air quality in Australia's three major capital cities (Sydney, Melbourne, Brisbane), as well as sulphur dioxide levels around the mining towns of Mt. Isa and Port Pirie. Information is provided on the changes in ozone depleting substances as well as information about temperature anomalies.

For a full list of definitions, please see the Atmosphere glossary.

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Greenhouse gas emissions

GREENHOUSE GAS EMISSIONS

Greenhouse gases (primarily carbon dioxide and methane) occur naturally in the atmosphere, trapping the sun's warmth to enable the Earth's surface temperature to support life. Human activities, particularly the burning of fossil fuels (e.g. coal, oil and gas), have increased the atmospheric concentrations of these gases, which means they trap more heat, thereby contributing to global warming and climate change.

The possible risks associated with climate change are hard to predict, but may include rising sea levels that could threaten homes and infrastructure in low lying areas, coral bleaching in the Great Barrier Reef, and changes in rainfall patterns across the country that may threaten agricultural areas. In 2007-08, nearly three-quarters (73%) of Australians reported that they were concerned about climate change (ABS 2008b).

The following sections explore in more detail Australia's net greenhouse gas emissions (the headline indicator), emissions per person, by sector and relative to GDP.

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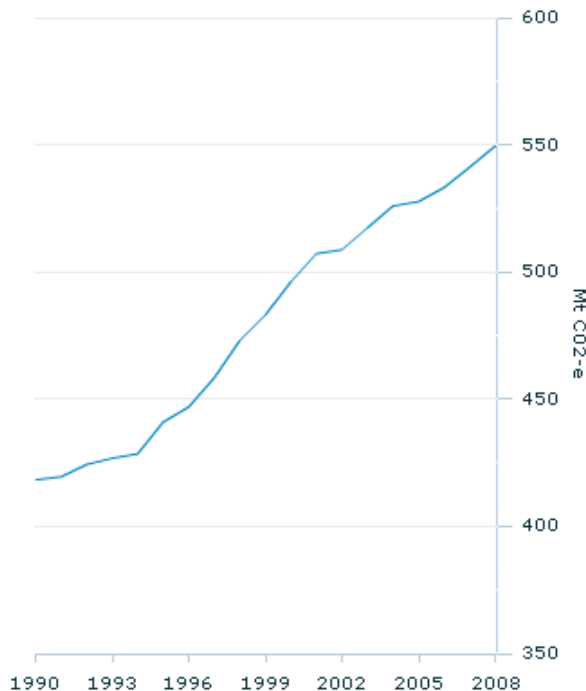
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Atmosphere

Net greenhouse gas emissions(a)



Footnote(s): (a) Excluding emissions from the land use, land use change and forestry sector.

Source(s): Department of Climate Change and Energy Efficiency, 2010, National Greenhouse Gas Inventory, May 2010

AUSTRALIA'S NET GREENHOUSE GAS EMISSIONS

Australia's net greenhouse gas emissions (excluding the land use, land use change and forestry sector) in 2008 totalled 549.5 million tonnes of carbon dioxide equivalent gas (Endnote 1). This was an increase of 31% over 1990 emissions (418.4 million tonnes).

Over the 10 year period to 2008, Australia's emissions have increased by 16% from 473.0 million tonnes.

The most commonly occurring greenhouse gas, based on millions of tonnes of CO₂-e, is carbon dioxide which comprised about three-quarters (73%) of Australia's total greenhouse gas emissions in 2008. Methane accounted for a further 21%, nitrous oxide 5% and the remaining 1% was a combination of hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride in 2008 (DCCEE 2010b).

The measurement of net greenhouse gas emissions changed in 2008 due to the Kyoto Protocol accounting rules for the Land use, land use change and forestry (LULUCF) sector changing between the 1990 base year and the commitment period (2008-2012). Due to this change in definition, and for consistency over time, the time series presented here is net greenhouse gas emissions excluding the LULUCF sector.

ENDNOTES

1. Carbon dioxide equivalent (CO₂-e) provides the basis for comparing the warming effect of different greenhouse gases. Different greenhouse gases have different effects and remain in the atmosphere for different periods of time. A tonne of methane, for example, contributes as much to global warming as 21 tonnes of carbon dioxide and thus has a Global Warming Potential (GWP) of 21, compared to carbon dioxide's GWP of 1. Each gas has a GWP so that each can be converted to a common CO₂ equivalent (CO₂-e). This enables emissions of different greenhouse gases to be compared by converting them to carbon dioxide equivalents (CO₂-e).

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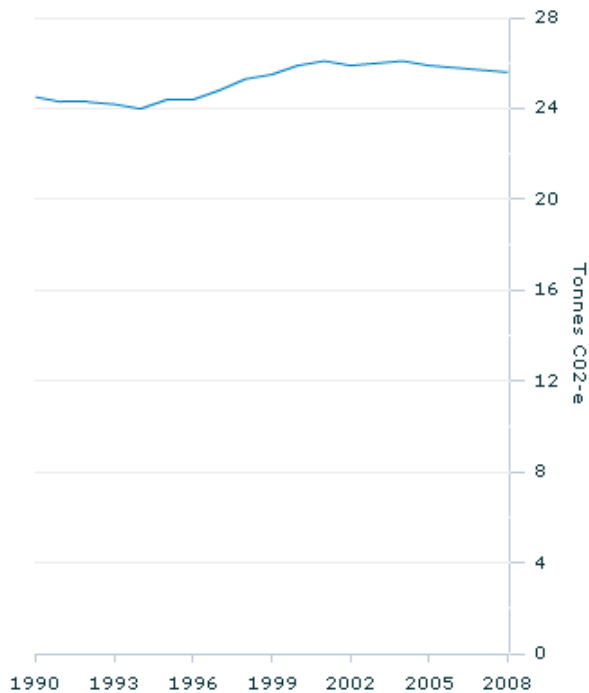
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Atmosphere

Net greenhouse gas emissions per capita(a)



Footnote(s): (a) Excluding emissions from the land use, land use change and forestry sector

Source(s): Department of Climate Change and Energy Efficiency, 2010, National Greenhouse Gas Inventory, May 2010; ABS Australian Demographic Statistics, Dec 2009 (cat. no. 3101.0)

GREENHOUSE GAS EMISSIONS PER CAPITA

Australia continues to emit a large volume of greenhouse gases per capita in comparison to other OECD countries.

Although Australia's annual greenhouse gas emissions (excluding the land use, land use change and forestry sector) rose 31% between 1990 and 2008, per capita emissions increased by only 4% from 24.5 tonnes of carbon dioxide equivalent gas in 1990 to 25.6 tonnes in 2008.

Australia's relatively high per capita emissions reflect a number of factors, including:

- the dominance of coal as a fuel in producing electricity
- the production of many goods in Australia (with high associated emission levels such as agricultural products) which are exported.

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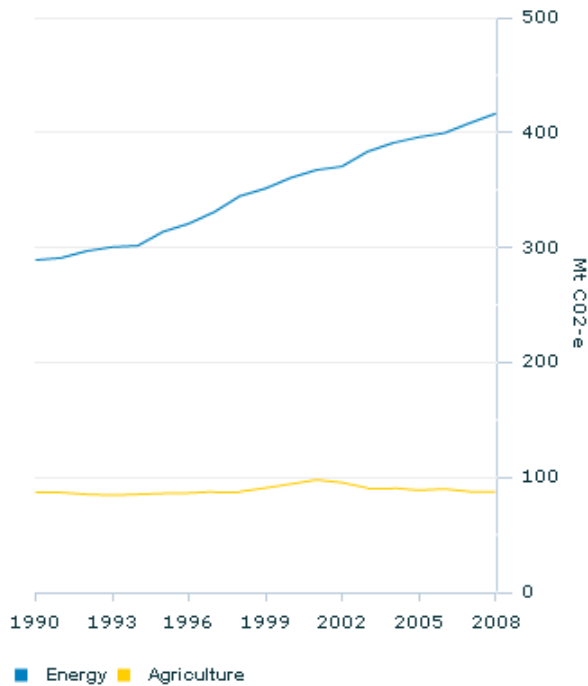
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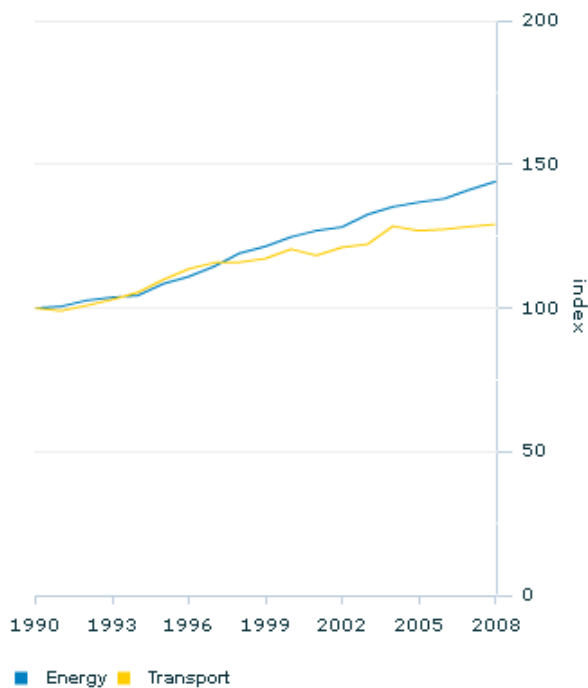
Emissions by sector(a)



Footnote(s): (a) Excluding emissions from the land use, land use change and forestry sector

Source(s): Department of Climate Change and Energy Efficiency 2010, National Greenhouse Gas Inventory, May 2010

Emissions(a) - energy and transport(b)



Footnote(s): (a) Index displays emissions as a percentage of 1990 emissions. (b) Excluding emissions from the land use, land use change and forestry sector

Source(s): Department of Climate Change and Energy Efficiency 2010, National Greenhouse Gas Inventory, May 2010

EMISSIONS BY SECTOR

Different sectors of the economy, and human activities, contribute to the release and capture of greenhouse gas emissions, and the removal of such emissions in different ways and by various amounts. Of the various sectors, the energy sector produces the majority of Australia's greenhouse gas emissions, accounting for about three-quarters (76%) of net emissions in 2008 (DCCEE 2010b).

Emissions from the energy sector increased by 44% between 1990 and 2008. Greenhouse gas emissions from the energy sector correlate with economic activity and are largely driven by population growth, economic growth and increased household income.

Within the energy sector, energy industries was the largest source of emissions (54%) relating to the combustion of fossil fuels, followed by transport activity (19%). Transport contributed 80.2 million tonnes of carbon dioxide equivalent gas or 15% of Australia's net emissions in 2008. Emissions from the transport industry were 29% higher in 2008 than in 1990 (DCCEE 2010b). Road transport was the main source of transport emissions in 2008, accounting for 69.2 million tonnes, or 13% of national emissions. Passenger cars were the largest transport source, contributing 41.6 million tonnes (DCCEE 2010a).

The agriculture sector was the next largest contributor to Australia's net greenhouse gas emissions. Agriculture produces most of Australia's methane and nitrous oxide emissions. The agriculture sector emitted 58% and 76% of Australia's methane and nitrous oxide emissions, respectively, in 2008 (DCCEE 2010b).

Emissions from the agriculture sector have stayed reasonably constant over time, with a maximum of 98.0 million tonnes in 2001 and a minimum of 84.7 million tonnes in 1993. A constant level however, has resulted in a fall in its proportion of total emissions, contributing 18.6% of total emissions in 1998 and 15.9% in 2008 (DCCEE 2010b).

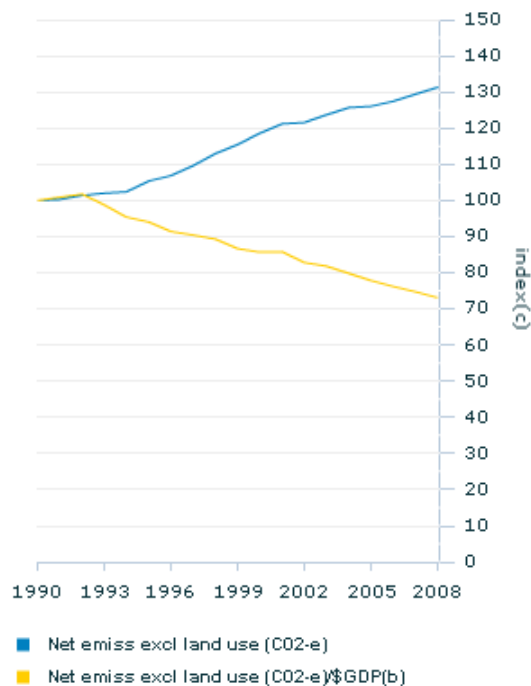
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Net greenhouse gas emissions per unit of GDP(a)(b)



Footnote(s): (a) Excluding emissions from the land use, land use change and forestry sector (b) GDP used is a chain volume measure; reference year 2007-08. (c) Index displays emissions as a percentage of 1990 emissions.

Source(s): Department of Climate Change and Energy Efficiency 2010 National Greenhouse Gas Inventory, May 2010; ABS Australian System of National Accounts, 2008-09 (cat. no. 5204.0)

EMISSIONS RELATIVE TO ECONOMIC ACTIVITY

There is a falling trend in emissions per unit of GDP. This trend has been attributed to a range of factors including better management of emissions across sectors, and stronger growth in the services sector than in the more energy intensive manufacturing sector.

The greenhouse gas emissions intensity of the Australian economy, expressed as emissions per dollar of Gross Domestic Product (GDP), fell 27% from an index value of 100 in 1989-90 to 73 in 2007-08.

There has been a steady decline in the amount of greenhouse gas emissions relative to GDP over the period 1989-90 to 2007-08. Although the nation's net greenhouse gas emissions increased by 31% between 1989-90 and 2007-08, the Australian economy (GDP) grew by 80%, and this resulted in the decline in emissions per unit of GDP (ABS 2009a).

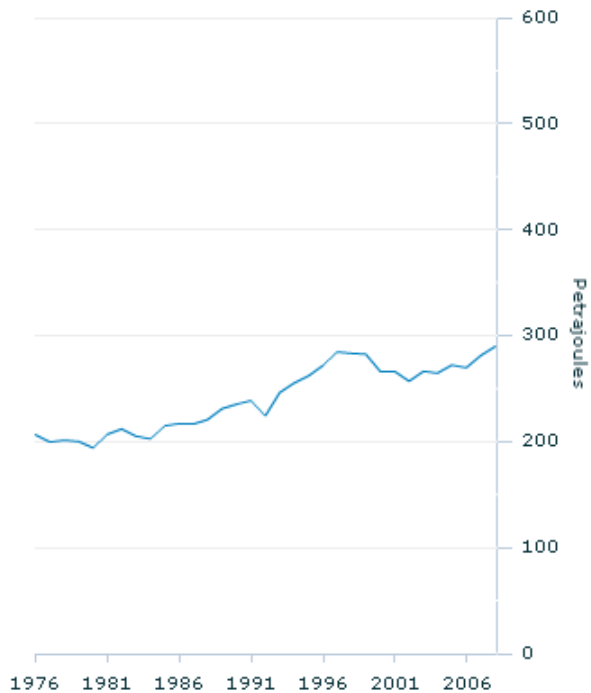
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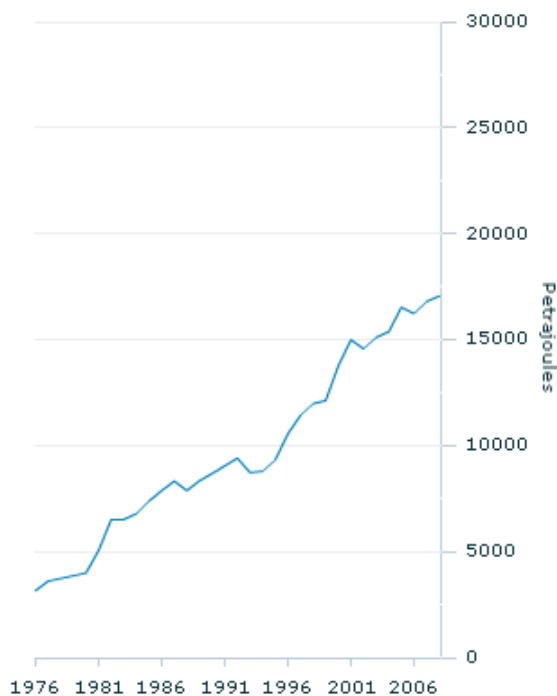
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Energy production from renewable sources



Source(s): ABARE 2009, Energy in Australia, 2009

Energy production from non-renewable sources



Source(s): ABARE 2009, Energy in Australia, 2009

ENERGY PRODUCTION FROM RENEWABLE SOURCES

Renewable energy sources, such as solar, hydropower, biomass and windpower, are naturally replenished and produce relatively few greenhouse gases.

Australia's production of renewable energy increased by 41% between 1975–76 and 2007–08 (from 206 petajoules (PJ) of energy to 290 PJ). However, in 2007-08, renewable energy still only accounted for about 5% of the total energy produced.

Renewable energy production is heavily dominated by bagasse, wood and hydro-electricity. Nearly three-quarters of renewable energy production in 2008 (72%) came from biomass (bagasse and wood), 15% from hydro-electricity, and 7% from wind and solar. Hydro-electricity generation was restricted due to continued drought conditions in many areas (ABARE 2009).

A number of large scale wind power projects have been completed in recent years, with more planned or under construction. Electricity generation from solar photovoltaic cells is growing quickly, but from a very low base, and has been encouraged by government subsidies for installation and the payment of feed-in tariffs (ABS 2010a).

The vast majority of Australia's primary energy production (95%) is from non-renewable sources. Black and brown coal accounted for more than half (54%) of primary energy production, and provided 84% of the fuel used to generate electricity in Australia. The remaining fuel used to generate electricity was mainly gas, followed by renewable energy sources and then oil.

GreenPower

The production of electricity is a major contributor to Australia's greenhouse gas emissions. GreenPower is a government renewable energy accreditation program which enables consumers to pay a premium for electricity generated from renewable resources such as solar, wind, biomass and hydroelectricity. By the end of 2009, there were approximately 838,500 residential customers of GreenPower in Australia (NSWDWE 2009).

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CHANGES IN AUSTRALIA'S ATMOSPHERE

Air quality is an important factor in the quality of life in Australia, especially for those living in major cities. Poor air quality has consequences on people's health, and can affect plants and animals. The concentration of fine particles in the atmosphere is a form of air pollution about which many health experts in Australia are most concerned. Human activities that create airborne particles include motor vehicle emissions, industrial processing, and the use of woodheaters. Outside of cities, sulphur dioxide pollution is an issue in some mining/minerals processing centres.

Ozone depletion and fine particles as air pollutants are of concern in Australia. When concentrations are at or above national air quality standards, health issues become a primary concern due to poor air quality.

Climate change has been described as a change in the state of climate that can be identified by changes in the average weather and/or its properties, which persists for an extended period of time (decades or longer). It is an issue which has the potential to threaten our biodiversity and have profound consequences on our economy and society (increasing frequency and severity of floods and rising sea levels, for instance, have the potential to cause significant damage).

The next section looks at greenhouse emissions from the land use, land use change and forestry sector, followed by ozone and smog, and particle concentrations in our three most populous cities - Sydney, Melbourne and Brisbane. It then tracks changes in the number of ozone depleting substances in the atmosphere, and sulphur dioxide levels around two mining towns (Port Pirie and Mt. Isa). Lastly, we discuss the change in Australia's temperature.

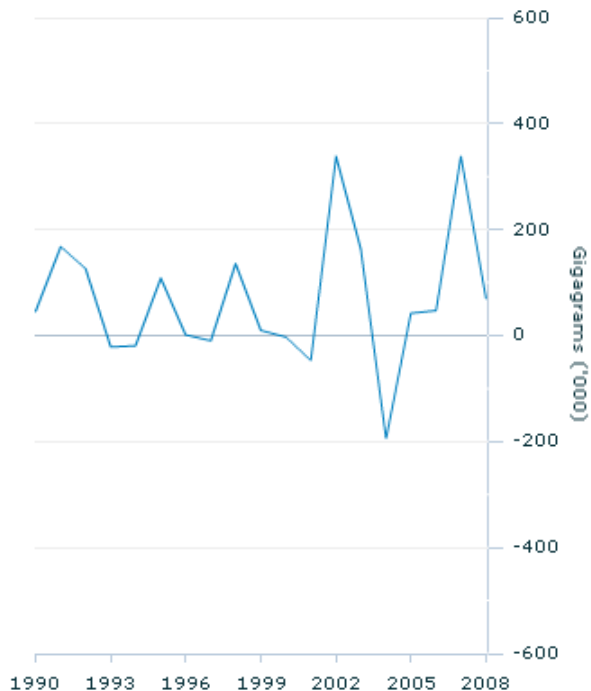
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Land use sector greenhouse gas emissions



Source(s): Department of Climate Change 2010, Australian Greenhouse Emissions Information System (AGEIS)

GREENHOUSE GAS EMISSIONS FROM LAND USE SECTOR

Net greenhouse gas emissions can be reported either including or excluding the land use, land use change and forestry sector. Net greenhouse gas emission measurements in this commentary have excluded the land use, land use change and forestry sector due to the change in Kyoto Protocol accounting rules between the 1990 base year and the commitment period (2008-2012). Nevertheless, emissions from the land use, land use change and forestry sector are of interest.

The following graph is of total emissions from the land use, land use change and forestry sector, including emissions from bushfires.

Total emissions for the land use, land use change and forestry sector have increased 49%, from 46.1 Gg in 1990 to 68.5 Gg in 2008. The emissions from this sector have been quite variable over time. From 1990 to 2008, emissions from this sector peaked at 338.5 in 2002 and 339.5 in 2007 due to additional emissions from bushfires (DCCEE 2010c).

Under Kyoto Protocol, not all of the land use, land use change and forestry (LULUCF) sector emissions are included in net greenhouse gas emissions. Of the 68.5 Gg of total greenhouse gas emissions from the LULUCF sector in 2008, only 26.6 Gg were included under the Kyoto Protocol. Due to a change in the Kyoto Protocol accounting rules in 2008, there is a difference in the inclusion of the LULUCF sector emissions between the base period (1990) and the commitment period (2008-2012). This change in definition has meant that no consistent timeseries is available including only part of the LULUCF sector, so total emissions from the LULUCF sector have been discussed here.

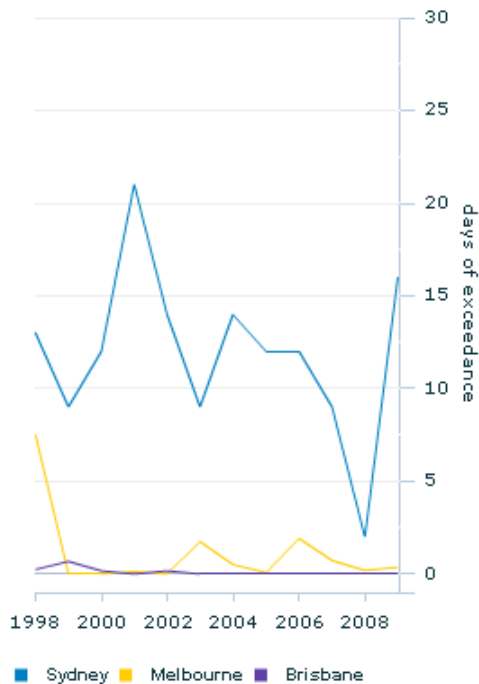
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Number of days when ozone concentrations exceed NEPM standard(a)



Footnote(s): (a) Each city contains several ozone monitoring stations. The data presented are an average of exceedance days across all ozone monitoring stations in each city. Melbourne averages only consider stations with data available for at least 74% of days in a given year.

Source(s): NSW Department of Environment, Climate Change and Water Air quality; Qld Department of Environment and Resource Management Resource Centre; Victoria Environment Protection Authority Air quality.

OZONE AND SMOG

Ozone is formed when oxides and nitrogen react with sunlight in the atmosphere. It is a natural part of the upper levels of the atmosphere where it absorbs harmful UV rays, preventing the rays from reaching the earth's surface.

Near the ground, ozone is a secondary pollutant, often formed by the reactions of primary pollutants. These pollutants arise mainly from vehicle emissions, stationary combustion sources, and industrial and domestic use of solvents. In high concentrations though, ozone can irritate the nose, airways and lungs, and can also damage plants.

For most Australian towns and cities, the level of ozone in the air does not exceed the National Environment Protection Measure (NEPM) standard. Even large cities like Melbourne and Brisbane averaged less than two days when levels exceeded the NEPM standard in each year from 1998 to 2008.

Of Australia's three most populous cities (Sydney, Melbourne & Brisbane), Sydney recorded the most days exceeding the four-hour ozone NEPM standard between 1998 and 2009. Sydney's warm temperatures in 2001 were reflected in the number of ozone exceedance days in that year (21 days). Ozone exceedances are associated with meteorological features such as high pressure systems, channelling effects induced by topography, and the sea breeze. Sydney usually records more than five days per year when the standard is exceeded, partly due to the topography of the Sydney Basin.

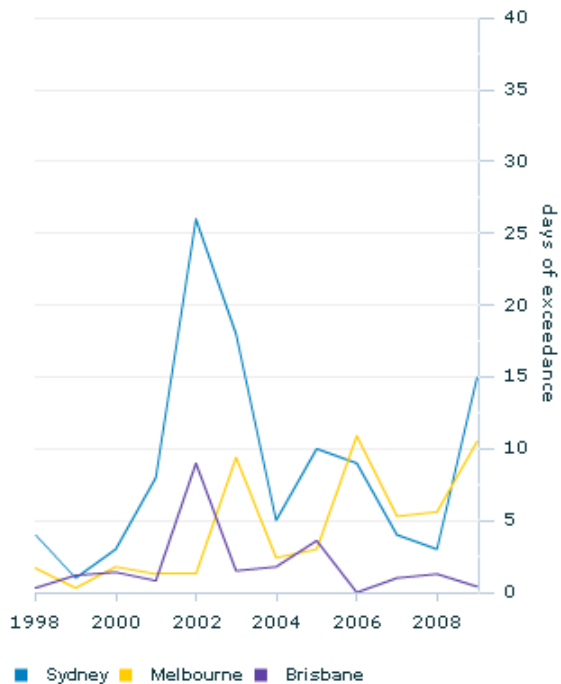
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Particle concentrations - daily 24 hour PM₁₀(a)



Footnote(s): (a) Each city contains several ozone monitoring stations. The data presented are an average of exceedance days across all ozone monitoring stations in each city. Melbourne averages only consider stations with data available for at least 74% of days in a given year.

Source(s): NSW Department of Environment, Climate Change and Water Air quality; Qld Department of Environment and Resource Management Resource Centre; Victoria Environment Protection Authority Air quality.

PARTICLE CONCENTRATIONS

The state of our air is an important factor in the quality of life in Australian cities. Poor air quality has health implications for humans, particularly those suffering from cardiovascular and respiratory disease, and can also affect plants and animals. The concentration of fine particles in the atmosphere is the form of air pollution about which many health experts in Australia are most concerned. Particles suspended in air have the ability to penetrate the lower airways of the lung if smaller than 10 micrometres in diameter (referred to as PM₁₀).

Fine particles in the atmosphere result from both natural and human sources. Natural sources include bushfires, dust storms, pollens and sea spray. Human activities that create airborne particles include motor vehicle emissions, industrial processes and woodheater use. There is increasing evidence to suggest that acute health effects may be the result of exposure to very fine particles, such as those smaller than 2.5 micrometres in diameter (PM_{2.5}). Most of these particles are generated by people, rather than occurring naturally.

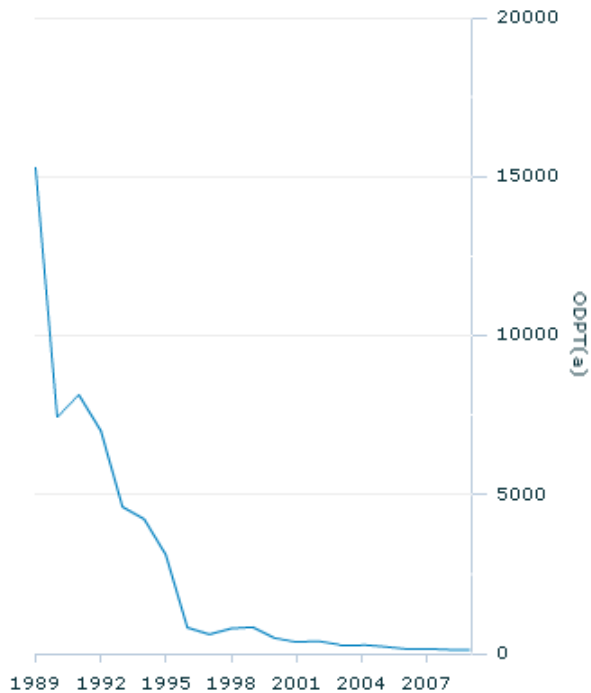
Air pollutant levels are not considered to be high in urban Australia relative to other cities in the world. Severe bushfires and dust storms caused the National Environment Protection Measure (NEPM) for fine particle (PM₁₀) concentrations in the air to be exceeded on 26 days in Sydney in 2002. In Melbourne, the number of days exceeded was 9 in 2003 and 11 in 2006.

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Ozone depleting substances



Footnote(s): (a) Ozone depleting potential tonnes

Source(s): Available from the Department of the Environment, Water, Heritage and the Arts on request

OZONE DEPLETION

Ozone in the upper atmosphere protects life on the Earth's surface by absorbing most of the sun's harmful ultraviolet B radiation. Human activity has been responsible for increasing the concentrations of ozone depleting substances in the atmosphere. The main substance responsible for ozone depletion is chlorofluorocarbons (CFCs).

Australia stopped the importation and production of CFCs during the 1990s. This saw the consumption of ozone depleting substances fall by 86%, from 832 Ozone Depleting Potential Tonnes (ODPT) in 1999 to 119 ODPT in 2009. This current level (119 ODPT in 2009) represents less than 1% of Australia's consumption of ozone depleting substances in 1989.

In the past decade, the ozone 'hole' over Antarctica has stayed at its current size of about 26 million km², following two decades of rapid growth (BOM, 2010c).

Synthetic Greenhouse Gases were largely introduced as replacements for some ozone-depleting substances. Three of the six Kyoto Protocol gases - hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆) - are Synthetic Greenhouse Gases. While these gases do not present a direct risk to the ozone layer, they can contribute to the enhanced greenhouse effect if emitted to the atmosphere.

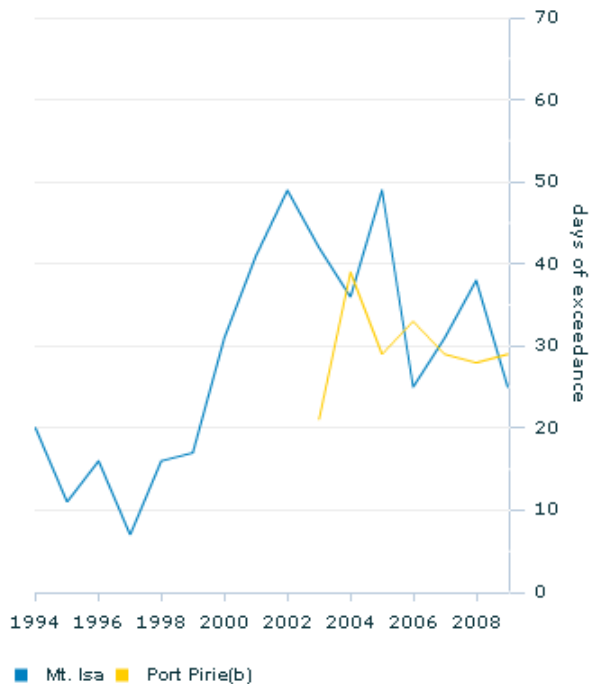
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Daily peak sulphur dioxide(a)



Footnote(s): (a) The National Environment Protection Measure (NEPM) standard maximum concentration for one-hour sulfur dioxide (SO₂) is 0.2 parts per million, allowable one day a year. The graph shows the number of days in which exceedances occurred, not total number of exceedances per year (as there may be more than one exceedance per day). (b) 2003 was the first year complete data was available for Port Pirie.

Source(s): Queensland Department of Environment and Resource Management by request; South Australia Environment Protection Authority by request.

SULPHUR DIOXIDE

Emissions of sulphur dioxide are primarily from industrial operations where fuels such as coal, oil and gas are burned. Sulphur dioxide is also emitted by vehicles. It can irritate the nose, throat and airways, and people with asthma or similar conditions are at risk of exacerbating these existing health problems.

In rural and regional Australia, levels of most air pollutants are generally well below the prescribed standards. However, sulphur dioxide levels are an air quality issue in some mining areas of Australia, in particular, in Port Pirie (in South Australia) and Mount Isa (in Queensland). For example, in Port Pirie, the number of days for which the prescribed standards were exceeded was 39 days in 2004. In 2002 and 2005, Mount Isa had 49 days of exceedance.

Other mining areas, such as Kalgoorlie and Kwinana in Western Australia, have reduced their sulphur dioxide levels since the early 1990s and have recently been meeting the National Environment Protection Measure (NEPM) standard (WAEPA 2007).

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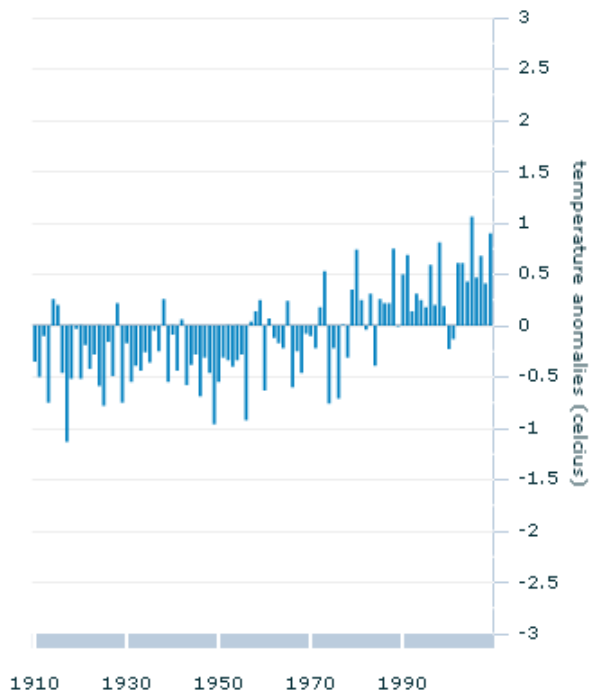
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Annual average temperature anomalies



Source(s): Bureau of Meteorology 2010 Annual Mean Temperature Anomaly - Australia

TEMPERATURE

2009 was Australia's second warmest year since high quality records began in 1910 and was marked by record-breaking heatwaves, extreme bushfires and dust storms. Record maximum temperatures in parts of Victoria were a major contributing factor in the Black Saturday bushfires on and around 7 February 2009.

2009 also marked the end of Australia's warmest decade on record. The mean temperature anomaly for the decade was 0.48°C above the long term average (1961-90). Since the 1940s each decade has been warmer than the preceding decade, indicating a shift to a long term trend to warmer temperatures. There is a clear upward trend in the number of hot events, and a downward trend in the number of cold events from 1960 (BOM 2010a).

While climate change can occur naturally, there is now widespread belief that global warming over the last half century is very likely the result of human activity, specifically the emission of greenhouse gases into the atmosphere. Australia has warmed by 0.9°C since 1950, and the average temperatures are projected to rise by a further 0.6 to 1.5 degrees by 2030, and by 1 to 5 degrees by 2070, depending on rates of greenhouse gas emissions. Different regions of Australia are expected to experience different rates of warming, with northern and inland areas most likely to experience greater warming (CSIRO 2009b).

Apart from increasing risks of bushfires and heat related illnesses, higher temperatures have other important impacts, such as increased water demand for agriculture in response to higher evaporation rates, and major peaks in electricity demand in summer.

Two-thirds of Australian homes now have coolers (mainly air conditioners) (ABS 2008a). In the summer of 2008-09, peak electricity demand was significantly higher than the peak winter demand because of greater use of air conditioners during hot days. Catering for major spikes in electricity demand requires expensive additional generating capacity and, in extreme weather conditions, electricity utilities may have to interrupt power supplies to customers to balance supply and demand (AER 2009).

Over the longer term, continued global warming would accentuate such problems and introduce major new challenges such as rising sea levels which will threaten low-lying coastal areas with inundation, mosquito-borne illnesses spreading southward, and increased coral bleaching in the Great Barrier Reef (CSIRO 2009b).

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LINKS TO OTHER DIMENSIONS OF PROGRESS

Air quality is linked to human health. While the full effects of pollutants such as fine particles are still poorly understood, Australian studies are consistent with those overseas which show that days of high pollution levels have increased mortality rates, hospital admissions and emergency room visits for respiratory and cardiovascular disease (ABS 2010a).

Polluted air can harm biodiversity: smog and acid rain can affect many plants and animals (CSIRO 2005).

Air quality can be linked to the generation of income. Economic activity, especially among the more energy-intensive industries, creates pollution. But in turn, air pollution has financial impacts, such as the cost of cleaning buildings, as acidic gases in the atmosphere can corrode iron and steel. Agriculture can also be affected, as polluted air can harm crops and livestock. Land clearance and degradation also contribute to air pollution as fine particles are created when vegetation is burnt and when eroded soil is blown into the air.

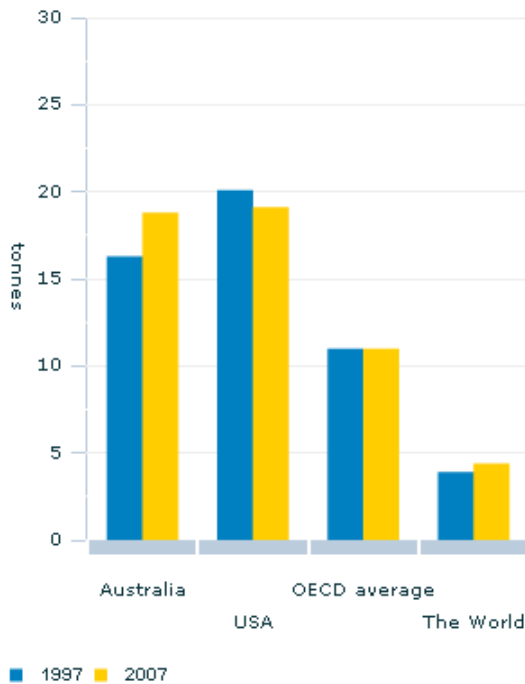
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Carbon dioxide emissions per capita(a)



Footnote(s): (a)This graph refers to combustion only.

Source(s): International Energy Agency, CO₂ Emissions from Fuel Consumption, 2009 edition

INTERNATIONAL COMPARISONS

While Australia accounts for less than 2% of global emissions of carbon dioxide, its per person emissions are nearly twice that of many other OECD countries (OECD, 2009).

Carbon dioxide (CO₂) accounted for about three-quarters (73%) of Australia's net greenhouse gas emissions in 2008, which is a subcomponent of the greenhouse gas emissions (excluding the land use, land use change and forestry sector) presented as a supplementary indicator (DCCEE, 2010b). Australia emitted 18.75 tonnes of carbon dioxide for every Australian, compared with an OECD country average of 10.97 tonnes per person.

Many large economies, including Japan (9.68 tonnes/person) and the United Kingdom (8.6 tonnes/person), had significantly lower per capita CO₂ emissions than Australia. Of the OECD countries for which data is available, only Luxembourg (22.35 tonnes/person) and the United States (19.1 tonnes/person) had higher per capita CO₂ emissions than Australia. However, some of the major oil exporting nations such as the United Arab Emirates (29.91 tonnes/capita) also had very high per capita emissions.

Australia's relatively high per capita emissions rate can be attributed to factors such as the high usage of coal in electricity generation, the energy intensive aluminium smelting sector, and the high dependence on motor vehicles and trucks for transport.

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ATMOSPHERE GLOSSARY

Air pollutant

Any substance in air that could, in high enough concentrations, harm humans, animals, vegetation or material.

Anomaly

The departure of an element from its long-period average value for the location concerned. For example, if the maximum temperature for June in Melbourne was 1 degree Celsius higher than the long-term average for this month, the anomaly would be +1 degrees Celsius. The current international standard is to use the 30 year average from 1961 to 1990 as the long-term average.

Bagasse

The fibrous residue of the sugar cane milling process that is used as a fuel (to raise steam) in sugar mills.

Biomass

Biomass is plant material, vegetation or agricultural waste used as a fuel or energy source. Biomass can also be processed to produce liquid biofuels (biodiesel) or a gas biofuel (biogas).

Carbon dioxide equivalents

Provides the basis for comparing the warming effect of different greenhouse gases. Different greenhouse gases have different effects and remain in the atmosphere for different periods of time. A tonne of methane, for example, contributes as much to global warming as 21 tonnes of carbon dioxide and thus has a Global Warming Potential (GWP) of 21, compared to carbon dioxide's GWP of 1. Each gas has a GWP so that each can be converted to a common CO₂ equivalent (CO₂-e). This enables emissions of different greenhouse gases to be compared and aggregated by converting them to carbon dioxide equivalents (CO₂-e).

Carbon sequestration

The uptake and storage of carbon.

Carbon sink

A pool (reservoir) that absorbs released carbon from another part of the carbon cycle.

Climate Change

A change in the weather over periods of time that range from decades to millions of years. It can be a change in the average weather or a change in the distribution of weather events around an average (for example, greater or fewer extreme weather events). Climate change may be limited to a specific region, or may occur across the whole earth. In recent usage, climate change usually refers to changes in modern climate, and is often referred to as global warming.

Combustion

Also known as burning, it is a process where a fuel is combined with oxygen, releasing energy, usually in the form of heat and/or light, and waste in the form of smoke and ash.

CFCs (chlorofluorocarbons)

Synthetic products, which do not occur naturally and contain chlorine and fluorine; commonly used in various industrial processes and as refrigerants and, prior to 1990, as a propellant gas for sprays; deplete

ozone in the stratosphere and are powerful greenhouse gases.

Deforestation

The deliberate human removal of forest cover and replacement with pasture, crops or other uses on land that was forest.

Energy

The heat or power that is generated by the burning of fuels.

Fuel

A substance burned as a source of heat or power.

Fugitive emissions

These are greenhouse gas emissions formed as a by-product, waste or loss in the process of fuel production storage or transport, such as leakage from pipelines.

Global warming

The increase in the average temperature of the earth's near-surface air and oceans since the mid-20th century.

Greenhouse gases

A collective term for those gases which reduce the loss of heat from the earth's atmosphere and thus contribute to global warming and climate change. Examples of greenhouse gases are water vapour, carbon dioxide, atmospheric methane, nitrous oxide, ozone and chlorofluorocarbons (CFCs).

GreenPower

GreenPower is a national accreditation program for renewable electricity products sourced from solar, wind, hydro, biomass, wave energy and landfill gas power.

GreenPower customers

Household or business who have opted to pay a premium to an energy provider for electricity generated from clean, renewable energy sources (such as solar, wind power, new hydro on existing dams, biomass, wave energy and landfill gas). The energy generators must be government accredited through the GreenPower program. The extra amount paid in addition to the electricity account is invested in the renewable energy sector.

Gross domestic product (GDP)

A measure of the overall value of economic production in Australian in a given period. The volume measure of GDP (chain volume takes out the impact of changes in prices) is an indicator of real growth in Australian economic activity.

Hydroelectricity

Hydroelectricity or hydro-electric power is electricity produced from the energy of falling water using dams, turbines and generators.

Kyoto Protocol

A protocol adopted by the supreme body of the UNFCCC in Kyoto, Japan, in 1997, committing signatories to limit or reduce anthropogenic greenhouse gas emissions relative to 1990 levels. The Kyoto protocol deals with carbon dioxide, nitrous oxide, methane, sulphur hexafluoride, hydrofluorocarbons and perfluorocarbons. Australia signed the Kyoto Protocol in 2007 and in doing so, committed Australia to

stabilise its emissions during 2008-2012 to no more than 108% of its 1990 level.

National Environment Protection Measure (NEPM)

The NEPM one-day standard for PM₁₀ is 50 micrograms per cubic metre with a maximum allowable exceedence of five days a year.

The NEPM standard for ozone measured over a four-hour period is 0.08 ppm (parts per million), allowed on one day a year.

Non-renewable fuels

A fuel which cannot be produced, re-grown, regenerated, or reused on a scale which can sustain its consumption rate. Fuels derived from fossil sources (coal, oil, Natural gas) or minerals (nuclear fuels) are non-renewable because they exist in a fixed amount, or are consumed much faster than nature can recreate them.

Ozone depletion

The process whereby the natural equilibrium between chemical reactions forming and destroying stratospheric ozone is disturbed by the release of manufactured chemicals.

Ozone Depleting Potential Tonnes (ODPT)

Estimates of Australia's total consumption of ozone depleting substances, weighted according to the ozone depleting potential of each, are presented as ozone depleting potential tonnes (ODPTs). ODPTs are an aggregated scale of measurement which allows the addition of quantities of different gases and then weights them according to the amount of ozone each could potentially deplete.

Particles

Microscopic or submicroscopic solid or liquid matter, such as soot, dust or smoke.

Photochemical smog

Air pollution caused by chemical reactions among various substances and pollutants in the atmosphere in the presence of sunlight.

Primary energy

Energy that is generated directly from natural resources, such as crude oil, hard coal and natural gas.

Renewable energy

Energy which comes from natural resources such as sunlight, wind, rain, tides and geothermal heat, which are naturally replenished.

Secondary energy

Energy that is generated from sources which are produced/transformed from primary commodities. Examples include petroleum products, coke-oven coke and charcoal.

Solar/solar photovoltaic

Photovoltaics (PVs) convert sunlight directly into electricity. PV systems differ from solar hot water systems in that they absorb sunlight directly into the water-carrying tubes contained in the panel.

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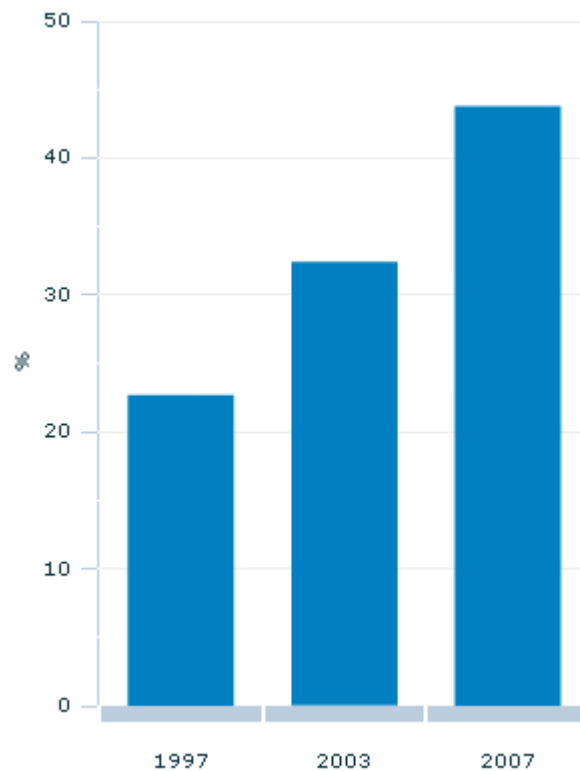


Waste

Although Australia's growing economy has brought prosperity to many Australians, the increasing use of resources has resulted in more waste being produced than ever before. As the measurement of waste is still an emerging field for statistical measurement, there is no headline indicator available to assess whether progress has been made in this dimension. The information that is available indicates:

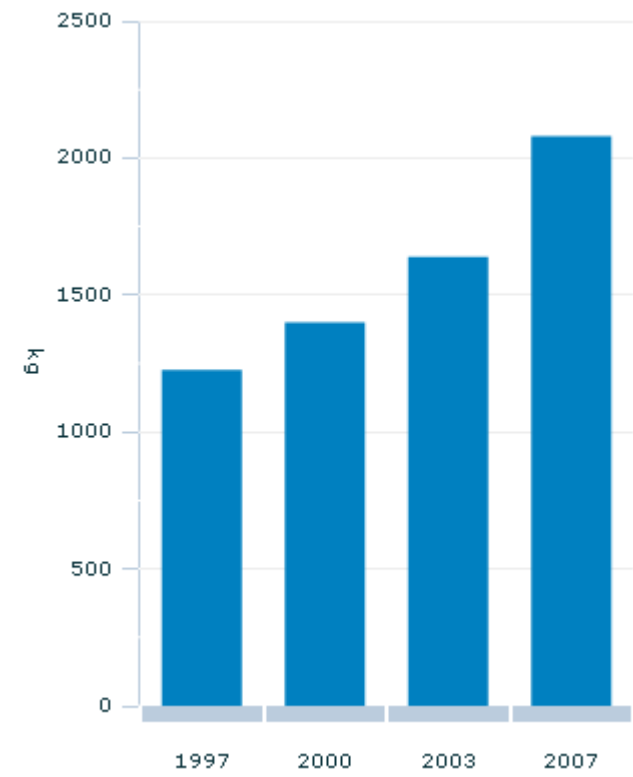
- The total volume of waste generated in Australia nearly doubled from 22.7 million tonnes in 1996-97 to 43.8 million tonnes in 2006-07.
- The volume of waste per person increased from 1,200 kg to 2,100 kg over the same period.
- Between 2001 and 2007, the volume of waste disposed to landfill increased from 19.0 million tonnes to 21.3 million tonnes.

Total waste generated

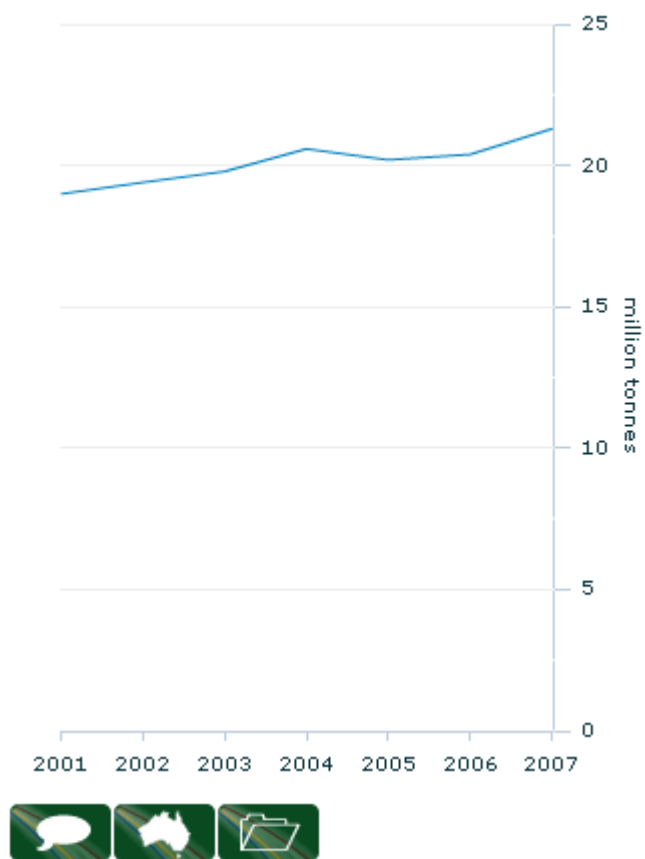




Waste generated per person



Total waste disposed to landfill



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WASTE AND PROGRESS

Waste generation accompanies all human activities in the form of solid, liquid and gaseous waste, and comes from households, building and demolition sites, and industry. It is expensive to deal with, has a damaging impact on the environment, affects people's health and can even influence trade in the economy.

There are many problems associated with waste that make it a significant environmental issue. Primary among those are the environmental consequences of disposing waste in the natural environment. Waste that is disposed of in landfills has the potential to contaminate soil and groundwater, and emit greenhouse and toxic gases into the atmosphere. When waste is disposed of through incineration or other means, its impacts upon the environment, and potentially on human health, are also significant.

When measuring progress in this area, there are three aspects that need to be considered. The first involves minimising the waste generated in the first place. The second is to use the waste generated as a resource where possible. The last aspect involves disposing of whatever waste cannot be recycled in a manner that is least harmful to the environment, the health of the population and economic progress.

The volume of waste generated would give a good indication of the cumulative impact that people and their waste have on the environment. Currently, there is no consistent data source that enables us to sufficiently assess whether progress has been made in this dimension. However, some information is available that enables us to present an indication of the volume of waste generated, and the amount generated per person, and these are presented as supplementary progress indicators.

Ensuring that waste is disposed of appropriately is an area of concern for governments, and for communities. When the amount of waste generated increases, it challenges the capacity of current facilities to cope and creates pressure for land on which to locate new waste disposal facilities. The location and social acceptance of new facilities, such as landfills, is also an issue, especially if it is perceived that such facilities may affect the lives of people situated nearby. Decomposition of organic waste releases methane into the atmosphere, adding to the increasing levels of greenhouse gases that contribute to global warming and climate change.

Additional supplementary progress indicators regarding the amount of waste disposed to landfill, greenhouse gas emissions from waste, and the diversion of waste from landfill to recycling facilities are also provided. These illustrate how the generation and disposal of waste is changing in Australia.

Further information is also included on household recycling.

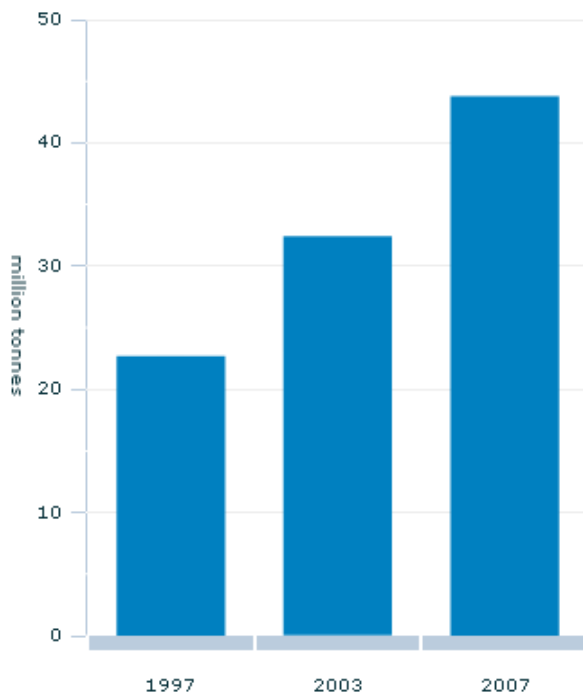
For a full list of definitions used, please see the Waste glossary.

RELATED PAGES

- [Waste glossary](#)
- [Waste references](#)

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Total waste generated(a)



Footnote(s): (a) Year ending 30 June.

Source(s): Hyder Consulting, Waste and Recycling in Australia, 2009, ; The Senate, Management of Australia's Waste Streams, 2008

TOTAL WASTE GENERATED

The total volume of waste generated is one measure of the overall impact of human activity on the environment.

Growth in the amount of waste generated in Australia has been driven by a number of economic and demographic factors. One of the consequences of Australia's fast-growing, materially intensive economy is the production of large quantities of waste.

Over the past decade, the total volume of waste generated in Australia has nearly doubled from 22.7 million tonnes in 1996-97 to 43.8 million tonnes in 2006-07.

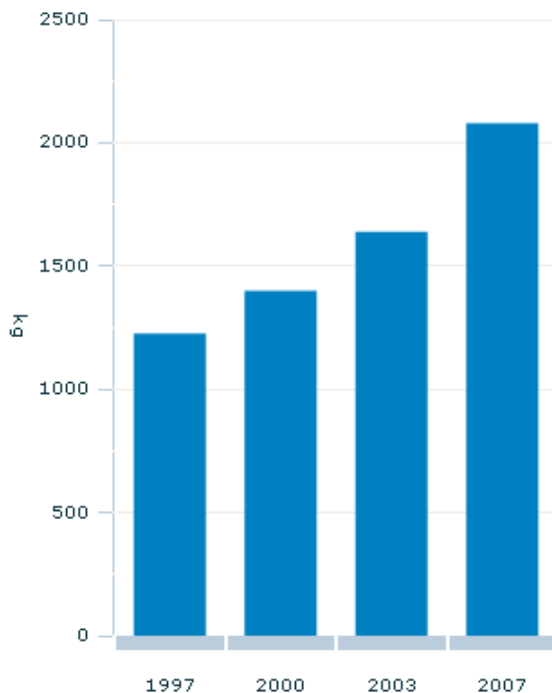
The total volume of waste generated in Australia each year has been growing faster than annual GDP growth. However, increases in the volume of waste generated are also due to improved reporting of waste and improved recycling data.

Less than a third (29%) of the waste generated in Australia in 2006-07 originated from household and other municipal sources. Waste from the commercial and industrial sector (33%) and from the construction and demolition sector (38%) accounted for the rest.

Population size is a strong determinant of the volume of waste produced in Australia. In 2006-07, the states with the largest populations contributed most of the country's waste: New South Wales (35%), Victoria (23%), and Queensland (18%).

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Waste generated per person(a)



Footnote(s): (a) Year ending 30 June.

Source(s): Hyder Consulting, Waste and Recycling in Australia, 2009; Productivity Commission, Inquiry Report No. 38: Waste Management, 2006; DEWHA, State of the Environment 2006; The Senate, Management of Australia's Waste Streams, 2008; ABS, Australian Demographic Statistics December 2009 (cat no. 3101.0)

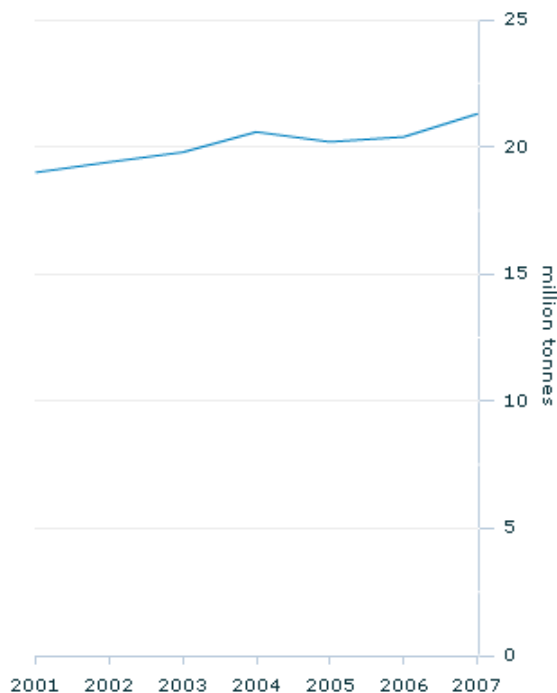
WASTE GENERATED PER PERSON

Between 1996-97 and 2006-07, the volume of waste produced per person in Australia grew at an average annual rate of 5.4%. In 1996-97, Australians generated approximately 1,200kg of waste per person. By 2006-07, this had increased to 2,100kg per person.

International evidence suggests that economic growth contributes to growth in waste generated per person (Productivity Commission 2006). Australia's economic prosperity over the past couple of decades has contributed to the growing generation of waste. Australians are among the highest users of new technology, and waste from obsolete electronic goods (e-waste) is one of the fastest growing types of waste (ABS 2006).

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Total waste disposed to landfill



Source(s): Department of Climate Change, 2009, National Inventory Report 2007 Volume 2

WASTE DISPOSED TO LANDFILL

Australia has a strong dependence on landfill as a form of waste management. The majority of waste that is not recycled or re-used in Australia is disposed of in the nation's landfills.

Landfills can impact on air, water and land quality. Landfill gas, mainly methane, is produced by decomposing organic waste which contributes to global warming when released to the air. Water moving from, or through, landfill waste forms leachate which has the potential to contaminate nearby surface and ground water. Potentially hazardous substances can also migrate through the surrounding soil via leachate or landfill gas.

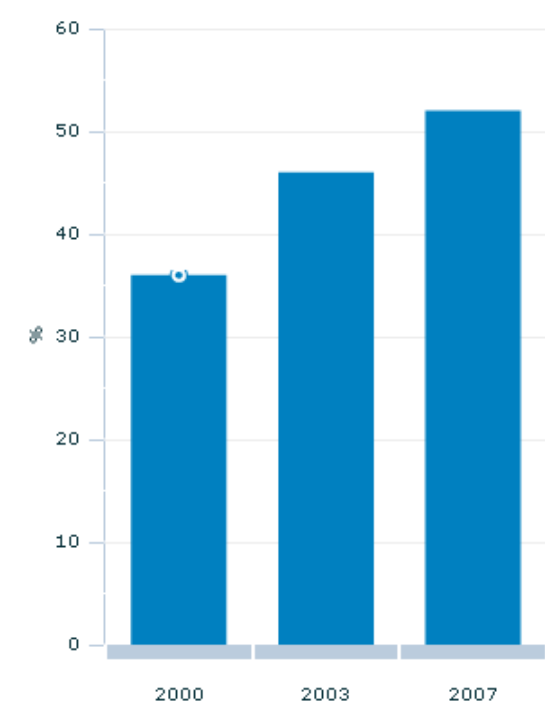
Between 2001 and 2007, the volume of waste deposited to landfill increased by 12%. In 2001, 19.0 million tonnes of waste were disposed to landfill, and by 2007 this had grown to more than 21.3 million tonnes.

Other indicators show that during 2006–07, nearly half (48%) of all waste was disposed to landfill. Approximately 60% of municipal waste, 44% of commercial and industrial waste, and 42% of construction and demolition waste went into landfill in 2006–07 (EPHC 2009).

Increases in Australia's population and per capita income over the period are likely to have contributed to the rise in waste production. This is due to the link between waste production and economic growth, whereby more waste is produced through the increased production and purchasing of goods and services. In 2007-08, there were 31.7 million new televisions, computers and computer products sold in Australia. A further 16.8 million units reached the end of their life that year, and of these, 84% were disposed to landfill (Hyder Consulting and PricewaterhouseCoopers 2009).

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Proportion of total waste diverted from landfills(a)



Footnote(s): (a) Year ending 30 June

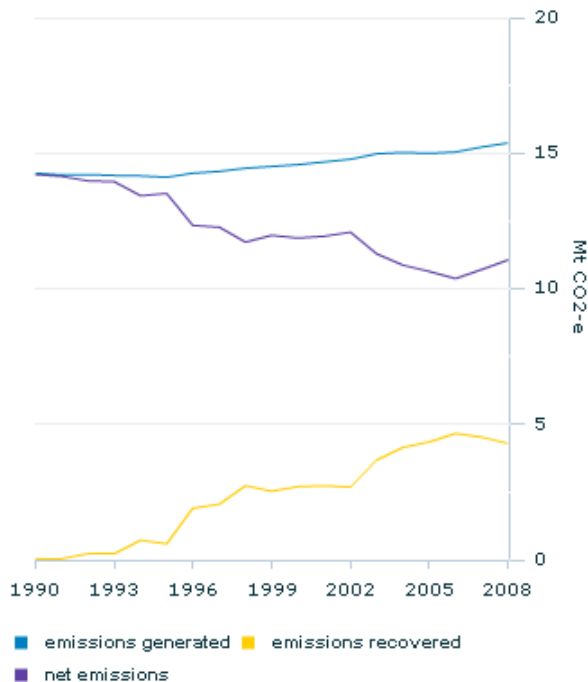
Source(s): Hyder Consulting, Waste and Recycling in Australia, 2009 ; DEWHA, State of the Environment 2006; The Senate, Management of Australia's Waste Streams, 2008

WASTE DIVERSION

Recycling of waste materials reduces the volume of waste disposed in landfills, reduces greenhouse gas emissions, helps eliminate non-biodegradable waste, and promotes a clean and healthy environment to live in.

During the last decade, the proportion of total waste being diverted from landfills to recycling facilities increased from 36% in 1999-2000 to 52% in 2006-07.

Landfill emissions



Source(s): Department of Climate Change and Energy Efficiency, National Greenhouse Gas Inventory, May 2010

EMISSIONS FROM WASTE

A significant by-product of waste disposal is gas emissions into the atmosphere. When organic waste decomposes in landfills, it releases methane and other greenhouse gases, contributing to climate change. Similarly, greenhouse gases can also be emitted during the treatment and processing of wastewater and sewage, or during the incineration of waste.

Recent years have seen significant declines in the total volume of greenhouse gases emitted by the waste sector. Between 1990 and 2008, net emissions from the waste sector declined by 20%. The waste sector's contribution to Australia's total greenhouse inventory has also declined, from 4.3% in 1990 to 2.6% in 2008 (DCCEE 2010).

Declines in waste emissions have been largely due to increases in the volume of greenhouse gases captured at Australia's landfills. In 1990, less than one percent of all landfill emissions were recovered. By 2008, this figure had increased to 28%. During this same period, the total volume of emissions being generated at Australian landfills only experienced a moderate increase (8%). Consequently, net emissions from Australian landfills has fallen by 22% between 1990 and 2008 (from 14.2 million tonnes of carbon dioxide equivalent emissions to 11.1 million tonnes).

Gas captured at Australian landfills can be utilised for many different purposes. Most is used as a fuel for electricity generation, but it can also be used to fuel nearby industrial facilities, or purified and sold to gas providers.

IMPORTANCE OF RECYCLING

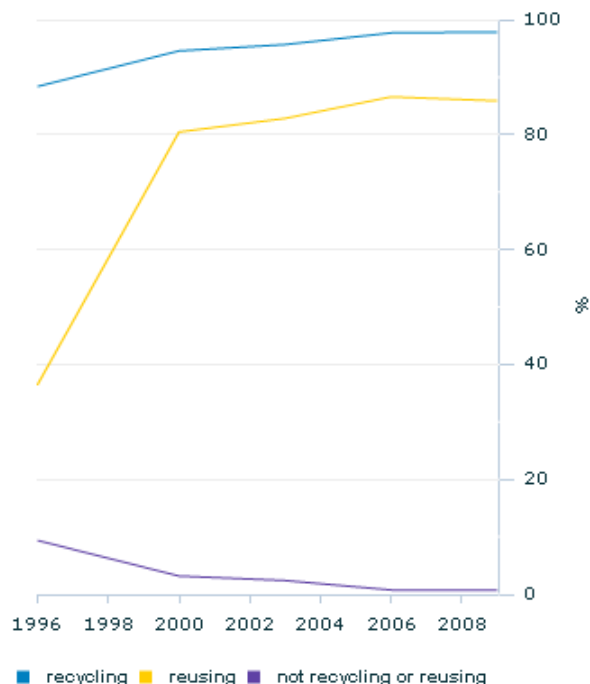
Waste recycling or reuse activity is important in reducing the impact of human waste on the environment. The more items that are reused and recycled, the less space is needed for landfill and the fewer emissions generated.

This next section looks at patterns in household recycling.

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Recycling and reuse of waste in households



Source(s): ABS Environmental Issues: Waste Management and Transport Use, March 2009 (cat. no. 4602.0.55.002) ; ABS Environmental Issues: People's Views and Practices, March 2006 (cat. no. 4602.0)

HOUSEHOLD RECYCLING

The recycling activities of households grew extensively between 1996 and 2009. In 1996, 91% of Australian households said they practised some form of waste recycling and/or reuse activity. In 2009, almost all Australian households (98%) reported that they recycled waste and 86% reported that they reused waste. Items commonly reused or recycled by households included paper, cardboard or newspapers (95%), plastic bottles (94%), glass (93%) and plastic bags (90%).

Recycling activities in Australia are facilitated by municipal kerbside recycling services. In 2009, over 91% of Australian households used municipal kerbside recycling to recycle waste, an increase from 87% in 2006.

While these statistics tell us the number of households that have recycled at least one item during the previous 12 months, they do not indicate how much household waste is recycled. A more informative measure would also take into account the volume of household waste that is recycled (per household) of all household waste.

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LINKS TO OTHER DIMENSIONS OF PROGRESS

Waste is an issue that relates to all other areas of the environment. The potential for inappropriately disposed waste to contaminate land and groundwater with heavy metals and other toxins is a significant concern, especially in jurisdictions where government oversight of waste management may be lacking. The release of methane and other gases from decomposing waste is also an issue as this contributes to greenhouse gas emissions and poor air quality. Non-biodegradable plastics are also a concern as these persist in the environment for many years and can wash into oceans and estuaries, harming marine and bird life.

Waste, and its management, also have clear economic dimensions. International evidence suggests that economic growth contributes to growth in the amount of waste generated per person (Productivity Commission 2006). Moreover, as the total volume of waste generated in Australia increases, so does the importance of businesses that exist to extract and recover materials from waste.

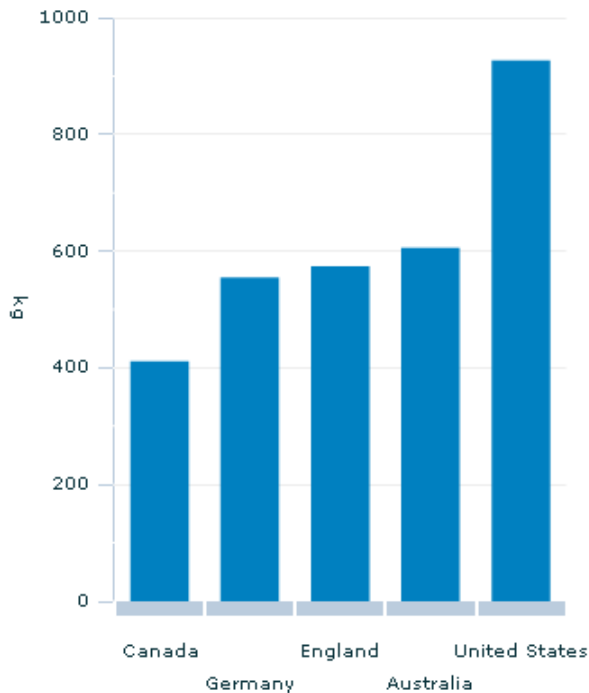
Waste also has social implications, especially for those who reside near waste disposal sites. Poorer health outcomes may be a concern for residents living near waste disposal sites. Also, proximity to disposal sites may reduce property prices and income sources, which is also an issue affecting people's wellbeing.

RELATED PAGES

- Land
- Inland waters
- Atmosphere
- Oceans and estuaries
- Biodiversity
- National income
- Health

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Waste generated per person(a)(b)



Footnote(s): (a) Municipal waste only. (b) Data is for year 2005 for Germany, 2006 for Canada and the United States, and 2006-07 for England and Australia

Source(s): Hyder Consulting, Waste and Recycling in Australia, 2009

INTERNATIONAL COMPARISONS

Currently there is a lack of internationally comparable data covering all sectors of waste generation. However, data on municipal waste generated are widely available.

The volume of municipal waste generated per person in Australia (606kg) is more than that generated in Canada (411kg), Germany (555kg), and England (574kg). However, Australia generates less municipal waste per person than the United States (927kg).

High rates of waste diversion in Australia increase its waste disposal performance relative to other countries. Australia's municipal waste diversion rate of 40% is above that of Canada (29%), England (31%) and the United States (33%). This places Australia in the mid-range of nations in terms of total municipal waste disposed in landfills on a per person basis.

RELATED PAGES

- [Waste glossary](#)
- [Waste references](#)

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WASTE GLOSSARY

Commercial and industrial waste

Waste that is produced by institutions and businesses; includes waste from schools, restaurants, offices, retail and wholesale businesses, and industries including manufacturing. Wastes from this source contain relatively higher proportions of metals, plastics and timber which can make waste a valuable source of recyclable product.

Construction and demolition waste

Waste that is produced by demolition and building activities, including road and rail construction and maintenance and excavation of land associated with construction activities. The waste stream usually covers only some of the generation, disposal and recycling of construction and demolition wastes, as these materials can also be found in commercial and industrial, and municipal solid waste streams, or as hazardous waste. It includes mostly inert materials such as timber, bricks, plaster off cuts, concrete, rubble, steel and excavated earth.

Diversion

The act of diverting a waste away from landfill for another purpose such as re-use or recycling.

Landfill

Land where waste is dumped and later buried. Also referred to as rubbish tip or dump.

Leachate

Liquid that has percolated through solid waste or other solids and has extracted materials from it by leaching.

Mt CO₂-e

Millions of tonnes (Mt) of carbon dioxide equivalent (CO₂-e) gases.

Municipal solid waste

Municipal solid waste is waste produced primarily by households and council facilities, including biodegradable material, recyclable materials such as bottles, paper, cardboard and aluminium cans, and a wide range of non-degradable material including paint, appliances, old furniture and household lighting.

Recycling

A resource recovery method involving the collection and processing of waste for use as a raw material in the manufacture of the same or similar non-waste products.

Reuse

Recovering value from a discarded item without reprocessing or re-manufacture. Typically this will involve an item being reused in its original function or similar. It does not preclude relatively minor pre-treatments like washing, reconditioning or painting.

Waste

Waste is generally defined as any product or substance that has no further use for the person or

organisation that generated it, and which is, or will be, discarded. Wastes may be solid, liquid or gaseous and can be hazardous or non-hazardous.

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WASTE REFERENCES

Australian Bureau of Statistics, 2006, Australia's Environment: Issues and Trends, 2006, cat. no. 4613.0, ABS Canberra

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Feature article

FUTURE DIRECTIONS IN MEASURING AUSTRALIA'S PROGRESS

Go to the [MAP downloads](#) for the full Feature Article.

"Part of the objective of rethinking our measurement systems is to generate a national and global dialogue on what we care about, whether what we are striving for is achieving what we care about, and whether this is reflected in our metrics"

*From Measuring Production to Measuring Well-being, Joseph E. Stiglitz,
Presentation to the Productivity Commission, Melbourne, July 29, 2010*

In recent decades, there has been a growing view that understanding progress involves bringing together measures from across the areas of social, economic and environmental activity. The ABS was the first national statistical organisation to move forward with this notion, releasing its first edition of MAP in 2002, providing an informative suite of information for those wishing to assess national progress.

Since then, national and international interest in measuring progress has accelerated, intensifying particularly over the last decade and the last few years. To take just one example, in 2009 the Commission on the Measurement of Economic Performance and Social Progress recommended a rethink of statistical measures and encouraged a global dialogue to ensure national statistical organisations are measuring what societies care about (Stiglitz, Sen, Fitoussi 2009).

Together with an Expert Reference Group, and in anticipation of extensive community input, the ABS has taken the opportunity to incorporate the best learning and ideas from this international discussion to carry forward its work on measuring progress. This article articulates how Australia's progress may best continue to be measured into the future, outlining some key steps to arriving at a refreshed approach.

Pulling all of the development steps outlined in the article together, the proposed approach is illustrated in the diagram below, although readers are encouraged to read the article in full as it provides a clear explanation of those steps. This approach is intended as a starting point, and to support discussion and debate around progress measurement towards arriving at a final progress framework.

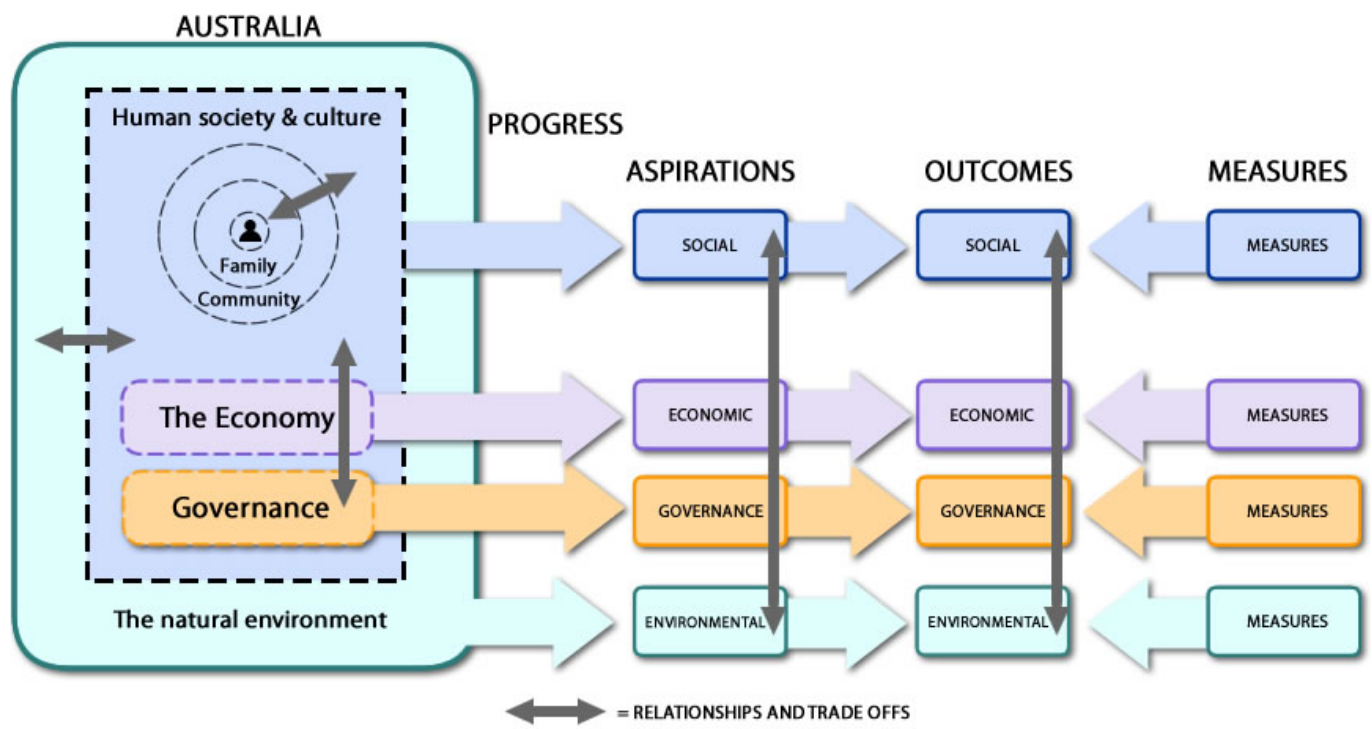
Some advantages of this approach include the transparency provided by differentiating "progress" from its goals or "aspirations". This simplifies discussion and focuses attention on the desired end-point of different aspects of societal progress. This dimension of the diagram intends to set out some universal principles representing what Australians care about at a broad level, and will be a key focus of the structured consultation ABS is planning over the next 12-18 months.

As well, different arenas of progress are delineated: social, economic, governance and environmental. This allows the different issues and aspirations associated with each arena to be considered clearly. A dimension providing for pragmatic outcomes is also included. These outcomes should indicate whether aspirations are being realised at a functional level, and will provide a conceptual stepping stone to detailed statistical measures.

Finally, relationships are indicated on this conceptual map with arrows. Such relationships include support relationships as well as the trade-offs which might occur between aspirations or outcomes for the different arenas of progress. This notion of trade-offs, whereby progress in one area is linked to regress in another, is a key aspect of the progress debate. It is a concern often expressed, for example, in relation to the connection between economic growth and environmental sustainability.


This model is designed to assist both experts and people from all walks of life to have a meaningful conversation about progress so the ABS is in a stronger position to measure what people care about. We hope those measures will then reflect and inform on Australia's progress into the future.

Readers are encouraged to share their views on the approach in this article in the [MAP blog](#).



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Appendices

[Appendix A - Full list of dimensions and indicators](#)

[Appendix B - Expert Reference Group Members](#)

[Appendix C - Progress Time Line](#)

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Appendices

FULL LIST OF DIMENSIONS AND INDICATORS

Headline dimensions

Society			
Headline dimension	Headline progress indicators	Supplementary progress indicators	Further information
Health	Life expectancy at birth	Infant mortality rate * Self-assessed health status * Potentially avoidable deaths	Causes of death * Incidence, death and survival rate of all Cancer * Prevalence of heart, stroke and vascular disease * Burden of disease * Living with a disability * Risk factors: smoking, alcohol consumption, obesity and exercise * Mental health
Education and training	People aged 25-64 with a vocational or higher education qualification	Education participation rate for people aged 15-19 years * Year 7/8 to Year 12 apparent retention rate	Participation in adult (non-formal) learning * Participation in work-related training * Participation in informal learning
Work	Unemployment rate	Long-term unemployment rate * Underemployment rate * Labour force underutilisation rate * Extended labour force underutilisation rate * Volume labour force underutilisation rate	Employment to population ratio * Labour force participation rate * Proportion of employed people working part-time * Proportion of employed people who are casual * Average weekly hours worked by full-time workers and part-time workers * Full-time adult ordinary time earnings
Crime	Victims of personal crime - assault * Victims of household crime - break-ins	Victims of personal crime - robbery * Victims of personal crime - sexual assault * Victims of household crime - other household crime * Feelings of safety at home alone * Feelings of safety alone in public places	Crime reporting rates * Homicide rate * Imprisonment rate * Repeat victims of crime * Repeat offenders of crime
Family, community and social cohesion	No headline indicator	Proportion of children without an employed parent * Proportion of people who volunteer * Suicide rate * Drug-induced death rate	Changes in family structure * Family stresses * Primary carers of elderly and disabled * Contact with family, friends and social networks * Homelessness
Democracy, governance and citizenship	No headline indicator	Proportion of overseas-born residents who are Australian citizens * People who were conferred Australian citizenship * Proportion of informal votes	Proportion of eligible Australians enrolled to vote * Voter turnout for federal elections * Proportion actively involved in civic and political groups *

cast in federal elections * Number of federal parliamentary election candidates * Proportion of federal parliamentarians who are women * Aboriginal and Torres Strait Islander members of Federal parliaments and State and Territory legislative assemblies * Proportion of executive managers of ASX200 companies who are women * Proportion of board members of ASX200 companies who are women * Ratio of Official Development Assistance to Gross National Income

Proportion who are volunteering for management, committee and coordination work * Proportion of adults who are concerned about the environment or climate change * Proportion of adults undertaking environmental action activities

Economy

Headline dimension	Headline progress indicators	Supplementary progress indicators	Further information
National income	Real net national disposable income per capita	Final consumption expenditure per capita * National net saving as a proportion of GDP	Gross domestic product per capita * Industry gross value added * Real gross state income per capita * Terms of trade * Population in work
National wealth	Real national net worth per capita	Real national assets and liabilities per capita * Real net foreign debt per capita	Net capital stock per capita * Economically demonstrated resources per capita
Household economic wellbeing	Average real equivalised disposable household weekly income for those in the low and middle income groups	Total household sector net worth* Household net worth	Mean value of selected household assets and liabilities * Household sector real final consumption expenditure per capita * Selected measures of equivalised disposable household income and distribution * Indicators of economic situation by household composition
Housing	Low income rental affordability	Low income renters in rental stress * Home ownership rates * Proportion of affordable homes by moderate income households	House price index * Private investment in dwellings
Productivity	Multifactor Productivity	None	Business innovation * Research and development * Business take-up of the Internet * Quality growth of labour inputs

Environment

Headline dimension	Headline progress indicators	Supplementary progress indicators	Further information
Biodiversity	Threatened fauna species	Threatened flora species * Proportion of Australia's total terrestrial area that is protected * Threatened ecological communities	None


Land	No headline indicator	Annual area of forest conversion and reclearing * Change in native forest area	Land use * State and territory native forest areas * Plantation forest area * Salinity * Invasive species of concern * Weeds of national significance
Inland waters	No headline indicator	Net water consumption * Water consumption per person * Agricultural water use * Reuse of water per person	Rainfall * Water storage * Household water conservation
Oceans and estuaries	No headline indicator	Australian fish stocks overfished and/or subject to overfishing * Commonwealth marine parks and protected areas	Coastal development (coastal population) * Marine pollution from oil spills * Bycatch and illegal fishing
Atmosphere	Net greenhouse gas emissions	Net greenhouse gas emissions per person * Net greenhouse gas emissions by sector * Net greenhouse gas emission per unit of GDP * Energy production from renewable sources (PJ)	Greenhouse gas emissions from land use sector * Number of days exceeding 4-hour ozone NEPM * Number of days exceeding fine particle concentrations NEPM * Ozone depleting potential tonnes * Number of days exceeding sulphur dioxide emissions * Average annual temperature anomalies
Waste	No headline indicator	Total waste generated * Waste generated per person * Total waste disposed to landfill * Waste diversion rate * Waste emissions	Household recycling

Supplementary dimensions

Supplementary dimension	Supplementary progress indicator	Other indicators
Culture and leisure	Participation in sport and physical recreation * Attendance at cultural venues and events * Attendance at sporting events	Time spent on recreation and leisure * Cultural trade * Volunteering in sports and culture
Communication	Household internet access * Household broadband access * Household computer access	Shopping online * Social networks * Internet security
Transport	Road deaths * Passenger vehicles per 1,000	Fuel consumption and emissions * Rail, sea, air and freight
Inflation	Consumer price index * Domestic final demand price index	Total final consumption expenditure * Total gross fixed capital formation
Competitiveness and openness	Real unit labour costs * Trade weighted index * Ratio of imports to GDP * Foreign ownership of Australian enterprise	None

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Appendices

APPENDIX B - EXPERT REFERENCE GROUP MEMBERS

Chair

Brian Pink

Australian Statistician

Committee Members:

(In alphabetical order)

Dr Subho Banerjee

Prime Minister and Cabinet

David Borthwick

Ex Secretary of the Department for the Environment, Water, Heritage and the Arts

Professor Mike Salvaris

Royal Melbourne Institute of Technology

Professor Fiona Stanley

Director - Telethon Institute for Child Health Research

Dr Ken Tallis

Australian Institute of Health and Welfare

Sue Vroombout


Department of Treasury

Mr Rob Ward

The Global Foundation

With support from ABS staff, in particular from the Social Progress and Reporting Section and the Social Statistics Group.

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Appendices

APPENDIX C - A PROGRESS TIME LINE

This time line tracking selected international developments in progress measurement is intended as a brief and representative overview of the last decade.

Many other developments occurred before 2000. For example, in Australia there was a Senate Inquiry into *National Wellbeing: A system of national citizenship indicators and benchmarks* in 1996; a national conference on measuring national progress in 1997; and the release of the seminal publication *Measuring Progress: Is life getting better?*, edited by Richard Eckersley and published by CSIRO Publishing in 1998.

Some international developments before 2000 include the Human Development Index and the Genuine Progress Indicator (GPI) launched in the USA in 1990 and 1995 respectively.

This time line focuses on events concerned with presenting social and environmental measures together with economic measures. Another closely related area of development is the broader and very considerable social indicator movement which had its origins in the early 1970s when the OECD launched the 24-nation Social Indicators Program.

image:progress time line

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1370.0 - Measures of Australia's Progress, 2010

ARCHIVED ISSUE Released at 11:30 AM (CANBERRA TIME) 15/09/2010

10/08/2011 The Education and training datacube has been amended to correct errors in the following tables:

- Table 3. Education participation rate, by age and sex - 1984-2009 (for the years 1999-2004)
- Table 4. Year 7/8 to Year 12 apparent retention rate, by sex(a) - 1984-2009 (for years 2008 and 2009)
- Table 5. Year 7/8 to Year 12 apparent retention rate, by state(a)(b) - 1995-2009 (for years 2008 and 2009)
- Table 9. Aboriginal and Torres Strait Islander peoples and non-Indigenous people, Year 7/8 to Year 12 apparent retention rate(a) - 1995-2009 (for years 2008 and 2009)
- Graphs generated using data from these tables have been updated to reflect the corrected data. Commentary has been unaffected by these changes.

25/02/2011 The Democracy, governance and citizenship datacube has been amended to correct errors in Table 5 for the years 1995, 2004 and 2005 (the total proportion of federal parliamentarians who are women).

24/09/2010 The Education and training datacube has been amended to correct an error in Table 3 for the year 1999 (education participation rate for males, females and persons aged 15-19 years and 20-24 years). The two associated graphs have been updated to reflect the corrected data.

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